

## 4336

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (286)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4765

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Arg | His | Glu | Val | Cys | Arg | Val | Leu | Pro | Ala | Pro | Xaa | Leu | Ile | Gly |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Met | Asp | Trp | Lys | Thr | Leu | Gln | Ala | Leu | Leu | Ser | Gly | Val | Asn | Lys |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ser | Thr | Ala | Phe | Gly | Arg | Ile | Trp | Leu | Ser | Val | Val | Phe | Val | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Leu | Val | Tyr | Val | Val | Ala | Ala | Glu | Arg | Val | Trp | Gly | Asp | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Lys | Asp | Phe | Asp | Cys | Asn | Thr | Lys | Gln | Pro | Gly | Cys | Thr | Asn | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Tyr | Asp | Asn | Tyr | Phe | Pro | Ile | Ser | Asn | Ile | Arg | Leu | Trp | Ala | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Ile | Phe | Val | Thr | Cys | Pro | Ser | Leu | Leu | Val | Ile | Leu | His | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Tyr | Arg | Glu | Glu | Arg | Glu | Arg | Arg | His | Arg | Gln | Lys | His | Gly | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Cys | Ala | Lys | Leu | Tyr | Asp | Asn | Ala | Gly | Xaa | Lys | His | Gly | Gly | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Trp | Thr | Tyr | Leu | Phe | Ser | Leu | Ile | Phe | Lys | Leu | Ile | Ile | Glu | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Leu | Tyr | Leu | Leu | His | Thr | Leu | Trp | His | Gly | Phe | Asn | Met | Pro |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Val | Gln | Cys | Ala | Asn | Val | Ala | Pro | Cys | Pro | Asn | Ile | Val | Asp |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Tyr | Ile | Ala | Arg | Pro | Thr | Glu | Lys | Lys | Ile | Phe | Thr | Tyr | Phe | Met |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Ala | Ser | Ala | Val | Cys | Ile | Val | Leu | Thr | Ile | Cys | Glu | Leu | Cys |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Leu | Ile | Cys | His | Arg | Val | Leu | Arg | Gly | Leu | His | Lys | Asp | Lys | Pro |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

## 4337

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Gly | Cys | Ser | Pro | Ser | Ser | Ser | Ala | Ser | Arg | Ala | Ser | Thr | Cys |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Cys | His | His | Lys | Leu | Val | Glu | Ala | Gly | Glu | Val | Asp | Pro | Asp | Pro |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |

Gly Asn Asn Lys Leu Gln Ala Ser Ala Pro Asn Leu Thr Xaa Ile  
275 280 285

<210> 4766

$\langle 211 \rangle$  90

<212> PRT

<213> Homo sapiens

<400> 4766

Cys Thr Pro Phe Leu Tyr Thr Glu Cys Gly Leu Leu Ser Glu Ile Gly  
1 5 10 15

Ser Phe Met Val Leu Glu Pro Pro Leu Tyr Ser Cys Leu Lys Phe Pro  
20 25 30

Ile Val Thr Glu Asn Ile Gly Cys Lys Ala Pro Gln Ser Pro Gln Val  
35 40 45

Pro Ser Val Ser Leu Asn Val Leu Val Pro Ser Arg Lys Ala Ser Ala  
50 55 60

Ser Ala Pro Phe Pro Pro Val Pro Ser Pro Arg Ile Met Asn Gly Tyr  
65 70 75 80

Cys Thr Val Lys Thr Val Val Ser Phe His  
85 90

<210> 4767

<211> 121

<212> PRT

<213> Homo sapiens

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

 $\langle 222 \rangle$  (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4767

Xaa Ser Gly Gln Lys Pro Gly Val Leu Ile Leu Pro Ser Val Ser Val  
1 5 10 15

## 4338

Leu Gly Ser Gly Phe Cys Arg His Pro Leu Thr Ser Ala Glu Leu Leu  
                   20                  25                  30

Gly Leu Leu Pro Ala His His Ile Ala Tyr Leu Gln Cys Gln Ser Leu  
           35                  40                  45

Thr Val Thr Leu Ser Ala Leu Val Ser Leu Ala Glu Pro Arg Cys Pro  
       50                  55                  60

Cys Ser Arg Gly Gln Lys Ala Cys Thr Trp Ala Lys Gly Pro Lys Val  
   65                  70                  75                  80

His Trp Thr Val Gly Lys Thr Pro Asp His His Leu Arg Thr Leu Ser  
                   85                  90                  95

Gln Asn Gly Lys Phe Thr Arg Thr Pro Phe Leu Ser Leu Cys Glu Ser  
           100                  105                  110

Pro Arg Glu Arg His Cys Thr Asp Ile  
       115                  120

<210> 4768

<211> 60

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (31)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (50)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (54)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4768

Phe Arg Asp His Pro Cys Lys Phe Pro Lys Asp Phe Phe Asn Met Val  
   1                  5                  10                  15

Leu Leu Ile Gln Ser Gly Gln Leu Asn Leu Lys Ser Thr Pro Xaa Lys  
           20                  25                  30

Pro Ser Gly Val Asp Asn Lys Ala His Lys Leu Arg Gln Phe Ser Phe

## 4339

35

40

45

Leu Xaa Pro Phe Arg Xaa Gly Thr Thr Thr Gly Ser  
 50 55 60

&lt;210&gt; 4769

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4769

Val Cys Asn Lys Ile Val Glu Ser Cys Met Ile Lys Ser Leu Leu Cys  
 1 5 10 15

Ser Glu Ile His Ser Asp Phe Leu Val Ser Pro Tyr Ile Ile Cys Ile  
 20 25 30

Leu Val Phe Phe Leu Thr Leu Leu Pro Leu Leu Pro Asn Arg Asp Leu  
 35 40 45

Asn Leu Ser Leu Phe Ser Ser Ser Arg Pro Gly Leu Val Pro Asp Ser  
 50 55 60

Ser Lys Asn Leu Asp Ser Lys Ala Tyr Phe Ile Val Cys Leu  
 65 70 75

&lt;210&gt; 4770

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4770

Gln Ala Arg Ile His Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr  
 1 5 10 15

Ala Val Ala Ala Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn  
 20 25 30

Ser Ala Arg Asp  
 35

&lt;210&gt; 4771

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



## 4340

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (65)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4771

Gly Ile Ser Phe Thr Leu Thr His Phe Ala Pro Leu Pro Phe Cys Tyr  
 1 5 10 15

Lys Tyr Tyr His Gly Met Lys Gln Lys Ala Cys Tyr Leu Pro Phe His  
 20 25 30

Asp His Phe Ala Asp Thr Val Ser Ala Thr Ser Lys Pro Ser Asn Ser  
 35 40 45

Met Asn Ser Arg Thr Asp Leu Asn Val Val Cys Val Gln Gly Ser Tyr  
 50 55 60

Xaa Asn Phe Leu Asn Leu Lys Cys His Gln Lys Thr Phe Cys Ser Leu  
 65 70 75 80

Leu Leu Leu Phe Phe Phe Phe  
 85

&lt;210&gt; 4772

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4772

Val Trp Leu Ala Leu Ser Val Val Gly Ser Val Tyr Thr Pro Pro Phe  
 1 5 10 15

Ser Ser Leu Gly Val Phe Phe Arg Asn Pro Lys Ala Thr Leu Arg Ala  
 20 25 30

Val Leu Thr Phe Leu Ser Thr Val Asp Tyr Pro Cys Leu Leu Gly Gly  
 35 40 45

Leu Xaa Met Gly Gln Arg Trp Arg Ser Pro Ser Gly  
 50 55 60

## 4341

&lt;210&gt; 4773

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4773

Lys Lys Lys Ser Phe Ser Glu Gly Glu Lys Ile Val Trp Val Trp Pro  
 1 5 10 15

Leu His Ile Leu Ala Asn Tyr Val Ala Ile Phe Met Ala Ser Val Ile  
 20 25 30

Lys Thr Leu Leu Leu Gly Ser Arg Ala Val Val Leu Asp Ser Leu His  
 35 40 45

Ser Ala His Leu Leu Lys Ser His Glu Ser Ser Leu Glu Ser  
 50 55 60

&lt;210&gt; 4774

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4774

Thr Ala Gln Gly Ile Gly Cys Thr Lys Leu Val Leu Lys Leu Leu Leu  
 1 5 10 15

Gly Ser Pro Gly Ala His Val Ser His Leu Leu Pro Ile His Ile Ser  
 20 25 30

Ala His Leu Ala Glu Ala Phe Pro Asp Leu Thr Ser Asp Asn Val His  
 35 40 45

Val Met Asn Thr Pro Lys Trp Leu Gly Leu Leu His Leu Ser Arg Trp  
 50 55 60

Ile Leu Pro Gln His Trp Gly Phe Leu Trp Ala Val His His Gly Tyr  
 65 70 75 80

Ile Ser Gly Phe Gln Asp Cys  
 85

&lt;210&gt; 4775

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4342

&lt;400&gt; 4775

Ala Lys Cys Met Leu Lys His Val Phe Thr Ser Val Lys Ser Phe Val  
 1 5 10 15

Asp Leu Leu Glu Met Lys Gly Phe Tyr Leu Asp Thr Val Ser Tyr Thr  
 20 25 30

Ser Leu Thr Ile Ile Phe Val Ile Val Val Phe Cys Lys Gln Lys Cys  
 35 40 45

Leu Trp Ala Ser Cys Arg Leu Lys Ile Val Gly Lys Asn Gly Leu Ser  
 50 55 60

Ser Gly Pro Phe Lys Gln  
 65 70

&lt;210&gt; 4776

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (96)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (105)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (113)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4776

Leu Asn Gln Met Ile Leu Thr Tyr Tyr Glu Gly Glu Glu Val Asn Ala  
 1 5 10 15

Gly Arg Ile Gly Leu Thr Leu Val Val Ala Gly Met Val Gly Ser Ile  
 20 25 30

Leu Cys Gly Leu Trp Leu Asp Tyr Thr Lys Thr Tyr Asn Phe Phe Met  
 35 40 45

Thr Gly Tyr Leu Pro Leu Gly Phe Glu Phe Ala Val Glu Ile Thr Tyr  
 50 55 60

## 4343

Pro Glu Ser Glu Gly Thr Ser Ser Gly Leu Leu Asn Ala Ser Ala Gln  
65 70 75 80

Ile Phe Gly Ile Leu Phe Thr Leu Ala Gln Gly Lys Leu Thr Ser Xaa  
85 90 95

Tyr Gly Pro Lys Ala Gly Asn Ile Xaa Leu Cys Val Trp Met Phe Ile  
100 105 110

Xaa Ile Ile Leu Thr Ala Leu Ile Lys Ser Asp Leu Arg Asp Thr Thr  
115 120 125

&lt;210&gt; 4777

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (55)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (82)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4777

Thr Asn Asp Tyr Lys Val Ser Val Gly Leu Trp Phe Arg Gly Pro Ser  
1 5 10 15

Xaa Ser Phe Leu Phe Pro Leu Ala Leu Met Arg Glu Met Pro Ser Ser  
20 25 30

Val Trp Ile Phe Leu Gly Ala Leu Trp Arg Asn Gly Val Cys Val Leu  
35 40 45

Thr Glu Glu Ser Gln Lys Xaa Glu Thr Ile Phe Ile Tyr Cys His His  
50 55 60

## 4344

Lys Tyr Ser Pro Pro Phe Lys Met Pro Val Tyr Thr Ala Ile Trp Glu  
 65 70 75 80

Thr Xaa Val Leu Glu Glu Ala Gly Ala Glu Gly Val Lys Thr Ser Ser  
 85 90 95

Val Gly

<210> 4778

<211> 99

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (20)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (51)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (55)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (83)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4778

Lys Gly Leu Phe Leu His Ile Tyr Ile Ile Tyr Val Tyr Ile Tyr Asn  
 1 5 10 15

Ile Tyr Met Xaa Ile Tyr Ile Ile Tyr Ile Tyr Tyr Ile Tyr Asn Ile  
 20 25 30

Tyr Ile Lys Tyr Ile Tyr Ile Cys Ser Pro Leu Ser Ala Ser Leu Ser  
 35 40 45

Gln Gly Xaa Ser Val Gly Xaa Cys Leu Gly Pro Ala Ser Leu Leu Thr  
 50 55 60

Ser Ser Ser Pro Leu Gly Thr Leu Ser Pro Tyr Ile Leu Ile Leu Asp  
 65 70 75 80

## 4345

His Val Xaa Asn Cys Phe Trp Val Asn Val Asp Ile Ile Val Ile Ile  
                     85                    90                    95

Ile Ile Asn

<210> 4779

<211> 81

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (31)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (45)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4779

Gly Phe Lys Ile Gly Arg Lys Cys Ser Ser Gly Lys Met Cys Ala Val  
     1                    5                    10                    15

Gln Lys Thr His Lys Phe Phe Arg Lys Gln Leu Gly Pro Val Xaa Val  
                     20                    25                    30

Asp Gln Ile Glu Ser Pro Arg Ile Leu Gly Ser Ser Xaa Leu Met Asn  
                     35                    40                    45

Gly Phe Trp Leu Ile Leu Pro Val Leu Gln Phe Leu Leu Leu Cys Glu  
                     50                    55                    60

Met Gly Asn Thr Leu Ser Ala Ser Leu Arg Cys His Gly Asn Lys Gln  
     65                    70                    75                    80

Asn

<210> 4780

<211> 95

<212> PRT

<213> Homo sapiens

<400> 4780

## 4346

Ser Thr Leu Arg Pro Ala Ala Gly Lys Glu Trp Glu Gln Trp Leu Ser  
 1 5 10 15  
 Ala Ile Arg Ser Gly Ser Met Gly Gln Trp Leu Asp Phe Cys Pro Arg  
 20 25 30  
 Pro Glu Glu Cys Ala Val Leu Ala Ser Val Ser Pro Pro Val Ala Leu  
 35 40 45  
 Val Gln Glu Pro Thr Val Gly Cys Ser Leu Pro Gly Pro Leu Leu Leu  
 50 55 60  
 Trp Ile Leu Pro Thr Pro Ser Cys Ser Trp Gly Arg Pro Phe Ser Gln  
 65 70 75 80  
 Arg Ser Leu Asn Lys Pro Lys Asn Pro Gln Lys Lys Lys Lys Lys  
 85 90 95

<210> 4781  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<400> 4781  
 Phe Ile Cys Thr Thr Phe Phe Arg Val Ala Ala Arg Thr Asn Leu Cys  
 1 5 10 15  
 Ala Leu Lys Cys Tyr Leu Leu Leu Ser Val Pro Lys Tyr Arg Glu Ile  
 20 25 30  
 Met Leu Gln Ile Ser Leu Leu Leu Asn Ile Met Leu Pro Asp Ala Phe  
 35 40 45  
 Ser Arg His  
 50

<210> 4782  
 <211> 455  
 <212> PRT  
 <213> Homo sapiens

<400> 4782  
 Ser Asp Leu Leu Phe Leu Asn Tyr Arg Gln Leu Phe Gly Glu Glu Asp  
 1 5 10 15  
 Ala Asp Gln Glu Val Ser Pro Asp Arg Ala Asp Pro Glu Ala Ala Trp  
 20 25 30

## 4347

Glu Pro Thr Glu Ala Glu Ala Arg Ala Arg Ala Ser Asn Glu Asp Gly  
 35 40 45  
 Asp Ile Lys Arg Ile Ser Thr Lys Glu Trp Ala Lys Ser Thr Gly Tyr  
 50 55 60  
 Asp Pro Val Lys Leu Phe Thr Lys Leu Phe Lys Asp Asp Ile Arg Tyr  
 65 70 75 80  
 Leu Leu Thr Met Asp Lys Leu Trp Arg Lys Arg Lys Pro Pro Val Pro  
 85 90 95  
 Leu Asp Trp Ala Glu Val Gln Ser Gln Gly Glu Glu Thr Asn Ala Ser  
 100 105 110  
 Asp Gln Gln Asn Glu Pro Gln Leu Gly Leu Lys Asp Gln Gln Val Leu  
 115 120 125  
 Asp Val Lys Ser Tyr Ala Arg Leu Phe Ser Lys Ser Ile Glu Thr Leu  
 130 135 140  
 Arg Val His Leu Ala Glu Lys Gly Asp Gly Ala Glu Leu Ile Trp Asp  
 145 150 155 160  
 Lys Asp Asp Pro Ser Ala Met Asp Phe Val Thr Ser Ala Ala Asn Leu  
 165 170 175  
 Arg Met His Ile Phe Ser Met Asn Met Lys Ser Arg Phe Asp Ile Lys  
 180 185 190  
 Ser Met Ala Gly Asn Ile Ile Pro Ala Ile Ala Thr Thr Asn Ala Val  
 195 200 205  
 Ile Ala Gly Leu Ile Val Leu Glu Gly Leu Lys Ile Leu Ser Gly Lys  
 210 215 220  
 Ile Asp Gln Cys Arg Thr Ile Phe Leu Asn Lys Gln Pro Asn Pro Arg  
 225 230 235 240  
 Lys Lys Leu Leu Val Pro Cys Ala Leu Asp Pro Pro Asn Pro Asn Cys  
 245 250 255  
 Tyr Val Cys Ala Ser Lys Pro Glu Val Thr Val Arg Leu Asn Val His  
 260 265 270  
 Lys Val Thr Val Leu Thr Leu Gln Asp Lys Ile Val Lys Glu Lys Phe  
 275 280 285  
 Ala Met Val Ala Pro Asp Val Gln Ile Glu Asp Gly Lys Gly Thr Ile  
 290 295 300



## 4348

Leu Ile Ser Ser Glu Glu Gly Glu Thr Glu Ala Asn Asn His Lys Lys  
 305 310 315 320

Leu Ser Glu Phe Gly Ile Arg Asn Gly Ser Arg Leu Gln Ala Asp Asp  
 325 330 335

Phe Leu Gln Asp Tyr Thr Leu Leu Ile Asn Ile Leu His Ser Glu Asp  
 340 345 350

Leu Gly Lys Asp Val Glu Phe Glu Val Val Gly Asp Ala Pro Glu Lys  
 355 360 365

Val Gly Pro Lys Gln Ala Glu Asp Ala Ala Lys Ser Ile Thr Asn Gly  
 370 375 380

Ser Asp Asp Gly Ala Gln Pro Ser Thr Ser Thr Ala Gln Glu Gln Asp  
 385 390 395 400

Asp Val Leu Ile Val Asp Ser Asp Glu Glu Asp Ser Ser Asn Asn Ala  
 405 410 415

Asp Val Ser Glu Glu Glu Arg Ser Arg Lys Arg Lys Leu Asp Glu Lys  
 420 425 430

Glu Asn Leu Ser Ala Lys Arg Ser Arg Ile Glu Gln Lys Glu Glu Leu  
 435 440 445

Asp Asp Val Ile Ala Leu Asp  
 450 455

<210> 4783

<211> 78

<212> PRT

<213> Homo sapiens

<400> 4783

Lys His Arg Tyr Leu Val Leu Thr Gly Cys Ala Trp Leu Thr Gln Val  
 1 5 10 15

His Leu Pro His Gly Lys Ser Ser Ser Lys Pro Leu His Asp Leu Trp  
 20 25 30

Gly Ala Gly Ser Gln Phe Val Ala Cys Asp Leu Pro Gln Pro Gln Lys  
 35 40 45

Ile Arg Asp His Glu Ala Pro Pro Pro Gly Ser Gly Asn Leu Ile  
 50 55 60

## 4349

His Ile Ala Arg Ala Leu Pro Val Arg Leu Trp Met Leu Thr  
 65 70 75

<210> 4784  
 <211> 102  
 <212> PRT  
 <213> Homo sapiens

<400> 4784  
 Pro Ser Ser Pro Arg His Ile Ser Pro Arg Met Asn Ala Val Leu Ser  
 1 5 10 15  
 Ala His Val Cys Val Glu Ala Ala Lys Val Gly Glu Leu Trp Ser Cys  
 20 25 30  
 Pro Asp Pro Phe Gly Ile Ala Gly Pro Ser Ser His Trp Arg Ala Gly  
 35 40 45  
 Val Gln Leu Thr Leu Gly Lys Glu Thr Ser Cys Leu Arg Val Ile Ser  
 50 55 60  
 Cys Glu Cys Lys Ala Trp Gly Ser Gly Ser Leu Gly Gly Lys Glu Pro  
 65 70 75 80  
 Val Arg Gly Leu Phe Pro Leu Ile Glu Leu Pro Arg Arg Ala Ser Ala  
 85 90 95  
 Met Pro Glu Thr Gln Thr  
 100

<210> 4785  
 <211> 87  
 <212> PRT  
 <213> Homo sapiens

<400> 4785  
 Glu Ile Pro Leu Leu Cys Phe Ala Ser Glu Ser Ser His Pro His Pro  
 1 5 10 15  
 Gln Asn Cys Gly Ala Trp Trp Ala Leu Thr Ser Thr Pro Leu Leu Phe  
 20 25 30  
 Ser Phe Ile Thr Phe Asp Leu Leu Lys Thr Ser Glu Arg Met Ser Val  
 35 40 45  
 Lys Phe Phe Ser Pro Ser Ser Ser Leu Ser Ser Leu Lys Gly Arg Asp  
 50 55 60

## 4350

Cys Ala Asn Thr Lys Gln Tyr Ser Phe Val Ser Ala Asn Ala Ser Val  
 65 70 75 80

Asp Ile Pro Ile Gly Ile Lys  
 85

<210> 4786

<211> 64

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (5)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (57)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4786

His Lys Glu Phe Xaa Arg Val Ser Gly Lys Lys Lys Lys Lys Lys Lys  
 1 5 10 15

Lys Lys Gly Gly Arg Ser Arg Gly Ser Lys Leu Thr Tyr Ala Cys Met  
 20 25 30

Arg Arg His Ser Ser Ser Ile Val Ser Pro Lys Phe Asn Ser Leu Ala  
 35 40 45

Val Val Leu Gln Arg Arg Asp Trp Xaa Asn Pro Gly Val Thr Gln Leu  
 50 55 60

<210> 4787

<211> 56

<212> PRT

<213> Homo sapiens

<400> 4787

Asp Thr Val Leu Lys Lys Ile Lys Asn Cys Lys Lys Met Lys Lys Lys  
 1 5 10 15

## 4351

Val Leu Ser Ile Ile Cys Ile Ile Gly Ile His Met Ser Leu His Lys  
                   20                                  25                                  30

Met Phe Asn Leu Lys Glu Ile Pro Leu Ile Leu Tyr Val Leu Leu Ser  
                   35                                  40                                  45

Val Val Cys Phe Ser Phe Ser Tyr  
           50                                  55

<210> 4788

<211> 274

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (15)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (16)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (64)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4788

Thr Cys His Cys Leu Pro Pro Pro Pro Ala Arg Ala Met Thr Xaa Xaa  
   1                                  5                                  10                                  15

Val Pro Arg Leu Ser Val Pro Ala Ala Leu Ala Leu Gly Ser Ala Ala  
                   20                                  25                                  30

Leu Gly Ala Ala Phe Ala Thr Gly Leu Phe Leu Gly Arg Arg Cys Pro  
                   35                                  40                                  45

Pro Trp Arg Gly Arg Arg Glu Gln Cys Leu Leu Pro Pro Glu Asp Xaa  
                   50                                  55                                  60

Arg Leu Trp Gln Tyr Leu Leu Ser Arg Ser Met Arg Glu His Pro Ala  
   65                                  70                                  75                                  80

Leu Arg Ser Leu Arg Leu Leu Thr Leu Glu Gln Pro Gln Gly Asp Ser  
                                   85                                  90                                  95

Met Met Thr Cys Glu Gln Ala Gln Leu Leu Ala Asn Leu Ala Arg Leu

## 4352

|   |     |     |
|---|-----|-----|
| 100   | 105 | 110 |
| Ile Gln Ala Lys Lys Ala Leu Asp Leu Gly Thr Phe Thr Gly Tyr Ser |     |     |
| 115   | 120 | 125 |
| Ala Leu Ala Leu Ala Leu Ala Leu Pro Ala Asp Gly Arg Val Val Thr |     |     |
| 130   | 135 | 140 |
| Cys Glu Val Asp Ala Gln Pro Pro Glu Leu Gly Arg Pro Leu Trp Arg |     |     |
| 145   | 150 | 155 |
| Gln Ala Glu Ala Glu His Lys Ile Asp Leu Arg Leu Lys Pro Ala Leu |     |     |
| 165   | 170 | 175 |
| Glu Thr Leu Asp Glu Leu Leu Ala Ala Gly Glu Ala Gly Thr Phe Asp |     |     |
| 180   | 185 | 190 |
| Val Ala Val Val Asp Ala Asp Lys Glu Asn Cys Ser Ala Tyr Tyr Glu |     |     |
| 195   | 200 | 205 |
| Arg Cys Leu Gln Leu Leu Arg Pro Gly Gly Ile Leu Ala Val Leu Arg |     |     |
| 210   | 215 | 220 |
| Val Leu Trp Arg Gly Lys Val Leu Gln Pro Pro Lys Gly Asp Val Ala |     |     |
| 225   | 230 | 235 |
| Ala Glu Cys Val Arg Asn Leu Asn Glu Arg Ile Arg Arg Asp Val Arg |     |     |
| 245   | 250 | 255 |
| Val Tyr Ile Ser Leu Leu Pro Leu Gly Asp Gly Leu Thr Leu Ala Phe |     |     |
| 260   | 265 | 270 |
| Lys Ile   |     |     |

&lt;210&gt; 4789

&lt;211&gt; 177

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (143)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4789

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Tyr | Arg | Glu | Ser | Trp | Tyr | Ala | Cys | Arg | Tyr | Arg | Ser | Gly | Ile | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 4353

Gly Ser Thr His Ala Ser Gly Ser Arg Phe Gln Ala Ser Ser Gln Leu  
                   20                  25                  30  
 Arg Ala Gly Ser Trp Arg Pro Arg Pro Leu Pro Pro Val Val Pro Ala  
           35                  40                  45  
 Val Pro Asp Gly Ser Ala Met Ala Gln Pro Pro Pro Asp Val Glu Gly  
       50                  55                  60  
 Asp Asp Cys Leu Pro Ala Tyr Arg His Leu Phe Cys Pro Asp Leu Leu  
   65                  70                  75                  80  
 Arg Asp Lys Val Ala Phe Ile Thr Gly Gly Gly Ser Gly Ile Gly Phe  
                   85                  90                  95  
 Arg Ile Ala Glu Ile Phe Met Arg His Gly Cys His Thr Val Ile Ala  
           100                  105                  110  
 Ser Arg Ser Leu Pro Arg Val Leu Thr Ala Ala Arg Lys Leu Ala Gly  
           115                  120                  125  
 Ala Thr Gly Arg Arg Cys Leu Pro Leu Ser Met Asp Val Arg Xaa Pro  
       130                  135                  140  
 Pro Ala Val Met Ala Ala Val Asp Gln Ala Leu Lys Glu Phe Gly Arg  
   145                  150                  155                  160  
 Ile Asp Ile Leu Ile Asn Cys Ala Ala Gly Asn Phe Leu Cys Pro Ala  
           165                  170                  175

Gly

<210> 4790

<211> 66

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4790

Xaa His Leu His Pro Leu Pro Phe Gln Ser Phe Ala Ser Pro Pro His  
   1                  5                  10                  15

Leu Ala Ile Lys Leu His Glu Asp Phe Ser Ser Ser Gly Ser Ala Trp  
           20                  25                  30

## 4354

Asn Leu Ser Tyr Ile Leu Pro Phe Pro Thr Cys Ser Leu Glu Cys Pro  
           35                          40                          45

Phe His Lys Tyr Ala Pro Thr Ala Gly Ser Ile Phe Phe Ser Phe Arg  
           50                          55                          60

His Leu  
       65

<210> 4791

<211> 68

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (17)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (61)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4791

Ala Ile Ser Xaa Val Arg Thr Ser Asn Ser Pro Ile Leu Ser Tyr Val  
       1                          5                          10                          15

Xaa Ser Asn Lys Leu His His Leu Leu Thr Gly Phe Phe Ile Ser Val  
                           20                          25                          30

Ile Ile Val Phe Ile Ser Arg Tyr Ser Ile Cys Leu Lys Asn Ile Cys  
           35                          40                          45

Met Ile Leu His Gly Phe Asn Ser Pro Asp Glu Tyr Xaa Ala Phe Asn  
       50                          55                          60

His Pro Ser Thr  
       65

<210> 4792

## 4355

<211> 84  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (2)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (17)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (27)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (61)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (62)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4792

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Xaa | Phe | Phe | Leu | Met | Lys | Cys | Ile | Val | Phe | Pro | Leu | Ala | Leu | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | His | Ile | Trp | Cys | Gln | Ala | Val | Leu | Leu | Xaa | Leu | Thr | Gly | Glu | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Cys | Leu | Leu | Ser | Ala | Ser | Pro | Ala | Val | Pro | Ala | Val | Ser | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Cys | Ile | Met | Thr | Arg | Leu | His | Phe | Pro | Pro | Ile | Xaa | Xaa | Gln | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Trp | Glu | Glu | Glu | Cys | Asp | Cys | Met | Ala | Arg | Ser | Leu | Gln | Pro | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

Ser Ala Ala Cys

<210> 4793



## 4356

<211> 88  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (41)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (45)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (54)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (65)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (74)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4793  
 Gly Ser Val Leu His His Pro His Ala Thr Pro Thr Thr His Arg Cys  
     1                    5                    10                    15  
 Thr Ala Thr Val Thr Gly Ala Ser Cys Leu Arg Met Gly Leu Arg Val  
                     20                    25                    30  
 Ile Asn Phe Phe Lys Gly Tyr Ile Xaa Ile Ala Tyr Xaa Ile Gln Ile  
           35                    40                    45  
 Lys Gly Pro Glu Phe Xaa Ala Asn Cys Thr Tyr Leu Phe Ala Asn Leu  
     50                    55                    60  
 Xaa His His Arg Lys Pro Lys Asp Ser Xaa Cys Gly Gln Ser Phe Thr  
     65                    70                    75                    80  
 Leu Gln Ser Leu Lys Tyr Phe Phe  
                     85

<210> 4794

## 4357

&lt;211&gt; 26

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4794

Arg Ser Ser Leu Phe His Gln Ala Gly Val Gln Trp His Asp Leu Ser  
 1 5 10 15

Ser Leu Gln Ser Pro Pro Pro Gln Phe Lys  
 20 25

&lt;210&gt; 4795

&lt;211&gt; 404

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (310)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4795

Ile Asp Arg Glu Leu Ser Pro Glu Gly Pro Gly Lys Glu Lys Glu Leu  
 1 5 10 15

Pro Gly Gln Thr Leu His Trp Gly Pro Glu Ala Thr Glu Ala Ala Gly  
 20 25 30

Arg Gly Leu Gln Pro Leu Lys Leu Asp Tyr Arg Ala Leu Ala Ala Val  
 35 40 45

Pro Ser Ala Gly Ser Val Gln Arg Val Pro Ser Gly Ala Ala Gly Gly  
 50 55 60

Lys Met Ala Glu Ser Pro Cys Ser Pro Ser Gly Gln Gln Pro Pro Ser  
 65 70 75 80

Pro Pro Ser Pro Asp Glu Leu Pro Ala Asn Val Lys Gln Ala Tyr Arg  
 85 90 95

Ala Phe Ala Ala Val Pro Thr Ser His Pro Pro Glu Asp Ala Pro Ala  
 100 105 110

Gln Pro Pro Thr Pro Gly Pro Ala Ala Ser Pro Glu Gln Leu Ser Phe  
 115 120 125

Arg Glu Arg Gln Lys Tyr Phe Glu Leu Glu Val Arg Val Pro Gln Ala  
 130 135 140

## 4358

Glu Gly Pro Pro Lys Arg Val Ser Leu Val Gly Ala Asp Asp Leu Arg  
 145 150 155 160  
 Lys Met Gln Glu Glu Glu Ala Arg Lys Leu Gln Gln Lys Arg Ala Gln  
 165 170 175  
 Met Leu Arg Glu Ala Ala Glu Ala Gly Ala Glu Ala Arg Leu Ala Leu  
 180 185 190  
 Asp Gly Glu Thr Leu Gly Glu Glu Glu Gln Glu Asp Glu Gln Pro Pro  
 195 200 205  
 Trp Ala Ser Pro Ser Pro Thr Ser Arg Gln Ser Pro Ala Ser Pro Pro  
 210 215 220  
 Pro Leu Gly Gly Gly Ala Pro Val Arg Thr Ala Lys Ala Glu Arg Arg  
 225 230 235 240  
 His Gln Glu Arg Leu Arg Val Gln Ser Pro Glu Pro Pro Ala Pro Glu  
 245 250 255  
 Arg Ala Leu Ser Pro Ala Glu Leu Arg Ala Leu Glu Ala Glu Lys Arg  
 260 265 270  
 Ala Leu Trp Arg Ala Ala Arg Met Lys Ser Leu Glu Gln Asp Ala Leu  
 275 280 285  
 Arg Ala Gln Met Val Leu Ser Arg Ser Gln Glu Gly Arg Gly Thr Arg  
 290 295 300  
 Gly Pro Leu Glu Arg Xaa Ala Glu Ala Pro Ser Pro Ala Pro Thr Pro  
 305 310 315 320  
 Ser Pro Thr Pro Val Glu Asp Leu Gly Pro Gln Thr Ser Thr Ser Pro  
 325 330 335  
 Gly Arg Leu Ser Pro Asp Phe Ala Glu Glu Leu Arg Ser Leu Glu Pro  
 340 345 350  
 Ser Pro Ser Pro Gly Pro Gln Glu Glu Asp Gly Glu Val Ala Leu Val  
 355 360 365  
 Leu Leu Gly Arg Pro Ser Pro Gly Ala Val Gly Pro Glu Asp Val Ala  
 370 375 380  
 Leu Cys Ser Ser Arg Arg Pro Val Arg Pro Gly Arg Arg Gly Leu Gly  
 385 390 395 400  
 Pro Val Pro Ser

4359

&lt;210&gt; 4796

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4796

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Xaa | Lys | Ser | Trp | Ser | Ser | Thr | Ala | Val | Ala | Ala | Ala | Leu | Glu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asp | Pro | Pro | Gly | Cys | Arg | Asn | Ser | Ala | Arg | Val | Cys | Leu | Phe | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Phe | Phe | Leu | Lys | Cys | Leu | Val | Ile | Pro | Gly | Phe | Leu | Leu | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Lys | Glu | Lys | Asn | Ala | Asp | Ser | Leu | Asp | Pro | Gly | Arg | Ala | Ser | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Pro | Asp | Cys | Arg | Leu | Ala | Ser | Gly | Ile | His | Gly | Phe | Pro | Lys | Cys |  |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     |  |

&lt;210&gt; 4797

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4797

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Pro | Ser | Leu | Ser | Phe | Ser | Ser | Ser | Val | Phe | Leu | Leu | Ser | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Pro | Ser | Pro | Ser | Ser | Ile | Ala | Thr | Phe | Ser | Pro | Thr | Arg | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ala | Tyr | Lys | Arg | Arg | Phe | Leu | Met | Leu | Leu | Cys | Leu | Leu | Thr | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Ser | Cys | Phe | Gln | Gln | Val | Phe | Leu | Pro | Pro | Val | Pro | Gln | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Leu | Leu | Arg | Arg | Ser | Asp | Leu | Pro | Leu | Met | Val | Ile | Pro | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

## 4360

Pro Leu Arg Pro Thr Ser Ala Lys Lys Glu Lys Val Lys Gln Gln Gln  
85 90 95

Gln

<210> 4798

$\langle 211 \rangle$  90

<212> PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4798

Ala Ser Tyr Tyr Met Xaa Leu His Phe Pro Gln Trp Phe Val His Ser  
1 5 10 15

Ser Ala Leu Gly Leu Val Leu Ala Pro Pro Phe Ser Ser Pro Gly Thr  
20 25 30

Asp Pro Thr Phe Pro Cys Ile Tyr Cys Arg Leu Leu Asn Met Ile Met  
35 40 45

Thr Arg Leu Ala Phe Ser Phe Ile Thr Cys Leu Cys Pro Asn Leu Lys  
50 55 60

Glu Val Cys Leu Ile Leu Pro Glu Lys Asn Cys Asn Ser Arg His Ala  
65 70 75 80

Gly Phe Val Gly Pro Ala Lys Leu Arg Gln  
85 90

<210> 4799

<211> 52

<212> PRT

<213> Homo sapiens

<400> 4799

His Cys Tyr His Ser His Ala Lys His Trp Leu His Thr Cys Ser Leu  
1 5 10 15

Phe Val Ile Asn Ile Lys Arg Leu Asp Leu Lys Pro Ser Ile Asn Glu  
20 25 30

## 4361

Arg Pro Phe Ile Trp His Ser Trp Asn Lys Thr Leu His Arg Tyr Gln  
35 40 45

Pro Leu His Ser  
50

<210> 4800

<211> 90

<212> PRT

<213> Homo sapiens

<400> 4800

Phe Val Gly Leu Thr Leu Pro Phe Ser Phe Ser Leu Glu Cys Leu Leu  
1 5 10 15

Gly Tyr Ala Leu Val Gly Leu Met Ser Phe Leu Gly Leu Gly Gly Val  
20 25 30

Cys Val Trp Leu Val Trp Gly Thr Phe Arg Gly Ser Ser Cys Thr Phe  
35 40 45

Pro Leu Leu Ser Val Cys Ser Ser Leu His Leu Leu Phe Val Cys Val  
50 55 60

His Phe Phe Ser Glu Gln Ser Phe Ser Leu Ala Thr Leu Ser Ser Leu  
65 70 75 80

Thr Val Phe Leu Phe Ser Ser Ser Leu Arg  
85 90

<210> 4801

<211> 78

<212> PRT

<213> Homo sapiens

<400> 4801

Leu Lys Leu Lys Arg Arg Gln Gly Ser Ile Gln Ala Glu Pro Val Leu  
1 5 10 15

Val Gln Thr Lys Asn Leu Thr Gly Thr Met Glu Gly Ser Ser Ser Pro  
20 25 30

Leu Leu Thr Phe Tyr Val Met Glu Arg Leu Glu Leu Ile Lys Val Leu  
35 40 45

Pro Phe Phe Tyr Ser Pro Glu Tyr Gln Arg Gln Leu Lys Ser Ala Thr  
50 55 60

## 4362

Asn Asp Leu Pro Val Ser Cys Phe Ile Phe Val Ile Asp Phe  
 65 70 75

<210> 4802  
 <211> 46  
 <212> PRT  
 <213> Homo sapiens

<400> 4802  
 Val Pro Ala Thr Thr Pro Gly Gln Tyr Leu Tyr Phe Leu Trp Arg Arg  
 1 5 10 15

Gly Phe Ala Met Leu Ala Arg Leu Val Ser Asn Tyr Trp Ala Gln Val  
 20 25 30

Ile His Pro Pro Gln Pro Pro Lys Val Leu Arg Leu Gln Ala  
 35 40 45

<210> 4803  
 <211> 86  
 <212> PRT  
 <213> Homo sapiens

<400> 4803  
 Trp Val Pro Leu Leu Phe Ala Phe Ser Phe Ser Glu Asn Val Cys Val  
 1 5 10 15

Leu Pro Leu Phe Trp Leu His Leu Gln Asn Ile Ser Phe Val Pro Met  
 20 25 30

Tyr Met Cys Lys His Ala Ile Ala Cys Val Val Gly Val Leu Tyr Phe  
 35 40 45

Val Trp Glu Lys Asn Tyr Gln Asn Glu Glu Glu Asn Phe Pro Tyr Leu  
 50 55 60

Cys Thr Arg Phe Leu Cys Phe Phe Phe Glu Phe Ser Gly Val Asp Ile  
 65 70 75 80

Asn Leu Ile Pro Ser Trp  
 85

<210> 4804  
 <211> 71

## 4363

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4804

Leu Trp Gln Asn Leu Phe Trp His Asn His Ile Cys Ser Leu Tyr Lys  
 1 5 10 15

Ile Ser Phe Leu Cys Phe Arg Lys Asn Val Ser Tyr Tyr Ser Glu Ser  
 20 25 30

Cys Asp Ser Asp Ser Ser Trp Phe Gly Ala Gln Lys Phe Leu Asn Met  
 35 40 45

Ser Leu Leu Leu Val Lys His Arg Ile Cys Phe Leu Gln Lys Phe Ile  
 50 55 60

Phe Asn Glu Glu Tyr Leu Ser  
 65 70

&lt;210&gt; 4805

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (77)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (105)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (106)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4805

Ala Leu His Thr Cys Trp Tyr Leu Leu Ala Asn Cys Ala Ala Leu Thr  
 1 5 10 15

Cys His Leu Ser Leu Cys Pro Asn Thr Thr Thr Val Ala Thr Val Pro  
 20 25 30

Thr Thr Ile Pro Thr Val Thr Leu Val Ile Ala Tyr Ser Ala Thr Asn  
 35 40 45



## 4364

Ser Pro Cys Gly Ser Thr Ser Met Leu Gly Leu Leu Ala Leu Pro Ser  
 50 55 60

Met Ser Thr Tyr Met Ala Ala Ser Ala Tyr Thr Thr Xaa Leu Leu Thr  
 65 70 75 80

Phe Thr Leu Val Gly Thr Leu Asn Leu Ala Ile Val Arg Leu Leu Ser  
 85 90 95

Ser Asn Arg Leu Thr Cys Asn Asn Xaa Xaa  
 100 105

&lt;210&gt; 4806

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (57)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4806

Trp Asp Cys Arg His Pro Pro Ser Cys Pro Ala Lys Phe Cys Thr Phe  
 1 5 10 15

Val Glu Met Glu Phe His His Val Gly Gln Ala Gly Leu Glu Leu Leu  
 20 25 30

Thr Ser Gly Asp Leu Pro Thr Leu Ala Ser Gln Ser Ala Gly Ile Thr  
 35 40 45

Gly Val Ser His His Ala Trp Thr Xaa Cys Cys Cys Cys Phe  
 50 55 60

&lt;210&gt; 4807

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4365

&lt;222&gt; (58)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4807

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Glu | Asp | Leu | Phe | Ser | Leu | Arg | Ser | Val | Cys | Gly | Val | Ser | Cys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Leu | Leu | Ser | Glu | Val | Trp | Pro | Gln | Gly | Leu | Arg | Glu | Val | Ala |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Pro | Gln | Gly | Gly | Pro | His | His | Arg | Gly | Cys | Cys | Pro | Thr | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Pro | Xaa | Ser | Gly | Thr | Leu | Pro | Xaa | Ser | Leu | Trp | Glu | Gly | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Thr | Gly | Leu | Glu | Asn | Arg | His | Pro | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |

&lt;210&gt; 4808

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (157)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (167)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (174)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4808

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Val | Gly | Pro | Leu | Leu | Val | Cys | Arg | Ala | Gly | Ala | Leu | Gly | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gly | Lys | Gln | Lys | Gly | Val | Asp | Lys | Glu | Phe | Phe | Leu | Leu | Phe | Thr |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Asp | Glu | Asn | Lys | Ser | Trp | Tyr | Ser | Asn | Ala | Asn | Gln | Ala | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

## 4366

Ala Met Leu Asp Phe Arg Leu Leu Ser Glu Asp Ile Glu Gly Phe Gln  
 50 55 60  
 Asp Ser Asn Arg Met His Ala Ile Asn Gly Phe Leu Phe Ser Asn Leu  
 65 70 75 80  
 Pro Arg Leu Asp Met Cys Lys Gly Asp Thr Val Ala Trp His Leu Leu  
 85 90 95  
 Gly Leu Gly Thr Glu Thr Asp Val His Gly Val Met Phe Gln Gly Asn  
 100 105 110  
 Thr Val Gln Leu Gln Gly Met Arg Lys Gly Ala Ala Met Leu Phe Pro  
 115 120 125  
 His Thr Phe Val Met Ala Ile Met Gln Pro Asp Asn Leu Gly Thr Phe  
 130 135 140  
 Glu Ile Tyr Cys Gln Ala Gly Lys Pro Ser Arg Thr Xaa Met Lys Ala  
 145 150 155 160  
 Ile Tyr Asn Gly Ser Asn Xaa Leu Gly Thr Lys Pro Pro Xaa Ala Thr  
 165 170 175  
 Leu Pro Thr Cys Lys Asn Leu Leu Phe His Gly  
 180 185

&lt;210&gt; 4809

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (127)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4809

Ala Ile Pro Leu Thr Asn Asp Gly Val Pro Ser Glu Ser Ser Ala Gly  
 1 5 10 15  
 Arg Leu Leu Cys Val Gly Arg Leu Gly Leu Gly Arg Gly Leu Ser Pro  
 20 25 30  
 Asn Leu Gly Pro Ala Glu Gln Glu Gln Asn His Tyr Leu Ala Gln Leu  
 35 40 45  
 Phe Gly Leu Tyr Gly Glu Asn Gly Thr Leu Thr Ala Gly Gly Leu Ala  
 50 55 60

## 4367

Arg Leu Leu His Ser Leu Gly Leu Gly Arg Val Gln Gly Leu Arg Leu  
 65 70 75 80

Gly Gln His Gly Pro Leu Thr Gly Arg Ala Ala Ser Pro Ala Ala Asp  
 85 90 95

Asn Ser Thr His Arg Pro Gln Asn Pro Glu Leu Ser Val Asp Val Trp  
 100 105 110

Ala Gly Met Pro Leu Gly Pro Ser Gly Trp Gly Asp Leu Glu Xaa  
 115 120 125

<210> 4810

<211> 216

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (91)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (197)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (215)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4810

Ala Ser Met Asp Pro Asp Ser Asp Gln Pro Leu Asn Ser Leu Asp Val  
 1 5 10 15

Lys Pro Leu Arg Lys Pro Arg Ile Pro Ile Ile Ile Ala Leu Leu Ser  
 20 25 30

Leu Ala Ser Ile Ile Ile Val Val Val Leu Ile Lys Val Ile Leu Asp  
 35 40 45

Lys Tyr Tyr Phe Leu Cys Gly Gln Pro Leu His Phe Ile Pro Arg Lys  
 50 55 60

Gln Leu Cys Asp Gly Glu Leu Asp Cys Pro Leu Gly Glu Asp Glu Glu  
 65 70 75 80

## 4368

His Cys Val Lys Ser Phe Pro Glu Gly Pro Xaa Val Ala Val Arg Leu  
                             85                            90                            95

Ser Lys Asp Arg Ser Thr Leu Gln Val Leu Asp Ser Ala Thr Gly Asn  
                             100                            105                            110

Trp Phe Ser Ala Cys Phe Asp Asn Phe Thr Glu Ala Leu Ala Glu Thr  
                             115                            120                            125

Ala Cys Arg Gln Met Gly Tyr Ser Ser Lys Pro Thr Phe Arg Ala Val  
                             130                            135                            140

Glu Ile Gly Pro Asp Gln Asp Leu Asp Val Val Glu Ile Thr Glu Asn  
                             145                            150                            155                            160

Ser Gln Glu Leu Arg Met Arg Asn Ser Ser Gly Pro Cys Leu Ser Gly  
                             165                            170                            175

Ser Leu Val Ser Leu His Cys Leu Ala Cys Gly Lys Ser Leu Lys Thr  
                             180                            185                            190

Pro Arg Val Val Xaa Gly Glu Glu Ala Ser Val Asp Ser Trp Pro Trp  
                             195                            200                            205

Gln Val Ser Ile Gln Tyr Xaa Lys  
                             210                            215

<210> 4811

<211> 139

<212> PRT

<213> Homo sapiens

<400> 4811

Ser Ser Asn Thr Phe Arg Leu Gln Val Gln Thr Gln Glu Ser Lys Ala  
                             1                            5                            10                            15

Gln Lys Glu Leu Glu Arg Gln Leu Ile Met Gln Ser Glu Met Arg Glu  
                             20                            25                            30

Arg Gln Met Ala Met Gln Ile Ala Trp Ser Arg Glu Phe Leu Lys Tyr  
                             35                            40                            45

Phe Gly Thr Phe Phe Gly Leu Ala Ala Ile Ser Leu Thr Ala Gly Ala  
                             50                            55                            60

Ile Lys Lys Lys Lys Pro Ala Phe Leu Val Pro Ile Val Pro Leu Ser  
                             65                            70                            75                            80

Phe Ile Leu Thr Tyr Gln Tyr Asp Leu Gly Tyr Gly Thr Leu Leu Glu

## 4369

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Met | Lys | Gly | Glu | Ala | Glu | Asp | Ile | Leu | Glu | Thr | Glu | Lys | Ser | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Gln | Leu | Pro | Arg | Gly | Met | Ile | Thr | Phe | Glu | Ser | Ile | Glu | Lys | Ala |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Lys | Glu | Gln | Ser | Arg | Phe | Phe | Ile | Asp | Lys |     |     |     |     |     |
|     |     |     |     |     |     | 130 | 135 |     |     |     |     |     |     |     |     |

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<210> 4812
<211> 121
<212> PRT
<213> Homo sapiens
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|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| <400> 4812 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| Gly        | Arg | Phe | Ala | Pro | Ser | Pro | Pro | Pro | Ala | Leu | Pro | Gly | Asn | Pro | Leu |  |
| 1          |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |  |
| Lys        | Met | Arg | Pro | Pro | Val | Leu | Arg | Glu | Pro | Gly | Ala | Pro | Ala | Ser | Ala |  |
|            |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |  |
| Pro        | Ala | Gln | Pro | Leu | Pro | Gly | Ala | Asp | Pro | Gly | Trp | Asp | Phe | Gly | Gly |  |
|            |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |  |
| Pro        | Ser | Leu | Ser | Pro | Leu | Arg | Glu | Asn | Arg | Pro | Gly | Arg | Cys | Gly | Glu |  |
|            | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |  |
| Gly        | Pro | Arg | Ala | Ile | Leu | Ala | Gly | Gly | Ala | Gly | Arg | Arg | Thr | Arg | Ala |  |
| 65         |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     |     | 80  |  |
| Arg        | Arg | Pro | Ser | Pro | Ala | Arg | Thr | Ser | Ser | Arg | Gln | Ser | Ser | Gly | Lys |  |
|            |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |  |
| Gly        | Ser | Leu | Phe | Phe | Ser | Leu | Gly | Lys | Ile | Lys | Ser | Pro | Arg | Glu | Asn |  |
|            |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |  |
| Lys        | Ala | Gly | Lys | Gly | Ala | Pro | Phe | Leu |     |     |     |     |     |     |     |  |
|            |     | 115 |     |     |     |     | 120 |     |     |     |     |     |     |     |     |  |

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<210> 4813
<211> 364
<212> PRT
<213> Homo sapiens
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 $\langle 220 \rangle$

## 4370

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (250)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4813

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gly | Gly | Xaa | Xaa | Thr | Gln | Trp | Ala | Xaa | Glu | Phe | Pro | Phe | Asp | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ala | Leu | Phe | Pro | Glu | Arg | Ile | Thr | Val | Leu | Asp | Gln | His | Leu | Arg |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Ala | Arg | Arg | Pro | Gly | Thr | Thr | Thr | Pro | Ala | Arg | Val | Asp | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gln | Gln | Ile | Met | Thr | Ile | Ile | Asp | Glu | Leu | Gly | Lys | Ala | Ser | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Gln | Asn | Leu | Ser | Ala | Pro | Ile | Thr | Ser | Ala | Ser | Arg | Met | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asn | Arg | His | Val | Val | Tyr | Ile | Leu | Lys | Asp | Ser | Ser | Ala | Arg | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Lys | Gly | Ala | Ile | Ile | Gly | Phe | Ile | Lys | Val | Gly | Tyr | Lys | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Val | Leu | Asp | Asp | Arg | Glu | Ala | His | Asn | Glu | Val | Glu | Pro | Leu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ile | Leu | Asp | Phe | Tyr | Ile | His | Glu | Ser | Val | Gln | Arg | His | Gly | His |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Glu | Leu | Phe | Gln | Tyr | Met | Leu | Gln | Lys | Glu | Arg | Val | Glu | Pro |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gln | Leu | Ala | Ile | Asp | Arg | Pro | Ser | Gln | Lys | Leu | Leu | Lys | Phe | Leu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4371

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 165 |  | 170 |  | 175 |
| Asn Lys His Tyr Asn Leu Glu Thr Thr Val Pro Gln Val Asn Asn Phe |     |  |     |  |     |
|   | 180 |  | 185 |  | 190 |
| Val Ile Phe Glu Gly Phe Phe Ala His Gln His Arg Pro Pro Ala Pro |     |  |     |  |     |
|   | 195 |  | 200 |  | 205 |
| Ser Leu Arg Ala Thr Arg His Ser Arg Ala Ala Ala Val Asp Pro Thr |     |  |     |  |     |
|   | 210 |  | 215 |  | 220 |
| Pro Ala Ala Pro Ala Arg Lys Leu Pro Pro Lys Arg Ala Glu Gly Asp |     |  |     |  |     |
|   | 225 |  | 230 |  | 235 |
| Ile Lys Pro Tyr Ser Ser Ser Asp Arg Xaa Phe Leu Lys Val Ala Val |     |  |     |  |     |
|   | 245 |  | 250 |  | 255 |
| Glu Pro Pro Trp Pro Leu Asn Arg Ala Pro Arg Arg Ala Thr Pro Pro |     |  |     |  |     |
|   | 260 |  | 265 |  | 270 |
| Ala His Pro Pro Pro Arg Ser Ser Ser Leu Gly Asn Ser Pro Glu Arg |     |  |     |  |     |
|   | 275 |  | 280 |  | 285 |
| Gly Pro Leu Arg Pro Phe Val Pro Glu Gln Glu Leu Leu Arg Ser Leu |     |  |     |  |     |
|   | 290 |  | 295 |  | 300 |
| Arg Leu Cys Pro Pro His Pro Thr Ala Arg Leu Leu Leu Ala Ala Asp |     |  |     |  |     |
|   | 305 |  | 310 |  | 315 |
| Pro Gly Gly Ser Pro Ala Gln Arg Arg Arg Thr Ser Ser Leu Pro Arg |     |  |     |  |     |
|   | 325 |  | 330 |  | 335 |
| Ser Glu Glu Ser Arg Tyr Leu Thr Ala Tyr Pro Ser Pro Cys Pro Gly |     |  |     |  |     |
|   | 340 |  | 345 |  | 350 |
| Gly Asp Leu Gly Val Gly Gln Gly Asn Pro Phe Ser                 |     |  |     |  |     |
|   | 355 |  | 360 |  |     |

&lt;210&gt; 4814

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4814

|   |
|---|
| Asn Thr Ala Lys Phe Thr Asn Cys Thr Cys Cys Ile Val Lys Pro His |
| 1 5 10 15   |
| Ala Val Ser Glu Gly Leu Leu Gly Lys Ile Leu Met Ala Ile Arg Asp |
| 20 25 30  |



## 4372

Ala Gly Phe Glu Ile Ser Ala Met Gln Met Phe Asn Met Asp Arg Val  
           35                          40                          45  
 Asn Val Glu Glu Phe Tyr Glu Val Tyr Lys Gly Val Val Thr Glu Tyr  
           50                          55                          60  
 His Asp Met Val Thr Glu Met Tyr Ser Gly Pro Cys Val Ala Met Glu  
           65                          70                          75                          80  
 Ile Gln Gln Asn Asn Ala Thr Lys Thr Phe Arg Glu Phe Cys Gly Pro  
                           85                          90                          95  
 Ala Asp Pro Glu Ile Ala Arg His Leu Arg Pro Gly Thr Leu Arg Ala  
                           100                          105                          110  
 Ile Phe Gly Lys Thr Lys Ile Gln Asn Ala Val His Cys Thr Asp Leu  
           115                          120                          125  
 Pro Glu Asp Gly Leu Leu Glu Val Gln Tyr Phe Phe Lys Ile Leu Asp  
           130                          135                          140  
 Asn  
 145

&lt;210&gt; 4815

&lt;211&gt; 404

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (14)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4815

Gln Asn Val Ile Met Phe Val Gly Leu Gln Gly Ser Gly Xaa Thr Thr  
           1                          5                          10                          15  
 Thr Cys Ser Lys Leu Ala Tyr Tyr Tyr Gln Arg Lys Gly Trp Lys Thr  
                           20                          25                          30  
 Cys Leu Ile Cys Ala Asp Thr Phe Arg Ala Gly Ala Phe Asp Gln Leu  
           35                          40                          45  
 Lys Gln Asn Ala Thr Lys Ala Arg Ile Pro Phe Tyr Gly Ser Tyr Thr  
           50                          55                          60  
 Glu Met Asp Pro Val Ile Ile Ala Ser Glu Gly Val Glu Lys Phe Lys

## 4373

|   |     |    |     |    |     |     |
|---|-----|----|-----|----|-----|-----|
| 65  |     | 70 |     | 75 |     | 80  |
| Asn Glu Asn Phe Glu Ile Ile Ile Val Asp Thr Ser Gly Arg His Lys |     |    |     |    |     |     |
|   | 85  |    | 90  |    | 95  |     |
| Gln Glu Asp Ser Leu Phe Glu Glu Met Leu Gln Val Ala Asn Ala Ile |     |    |     |    |     |     |
|   | 100 |    | 105 |    | 110 |     |
| Gln Pro Asp Asn Ile Val Tyr Val Met Asp Ala Ser Ile Gly Gln Ala |     |    |     |    |     |     |
|   | 115 |    | 120 |    | 125 |     |
| Cys Glu Ala Gln Ala Lys Ala Phe Lys Asp Lys Val Asp Val Ala Ser |     |    |     |    |     |     |
|   | 130 |    | 135 |    | 140 |     |
| Val Ile Val Thr Lys Leu Asp Gly His Ala Lys Gly Gly Gly Ala Leu |     |    |     |    |     |     |
|   | 145 |    | 150 |    | 155 | 160 |
| Ser Ala Val Ala Ala Thr Lys Ser Pro Ile Ile Phe Ile Gly Thr Gly |     |    |     |    |     |     |
|   | 165 |    | 170 |    | 175 |     |
| Glu His Ile Asp Asp Phe Glu Pro Phe Lys Thr Gln Pro Phe Ile Ser |     |    |     |    |     |     |
|   | 180 |    | 185 |    | 190 |     |
| Lys Leu Leu Gly Met Gly Asp Ile Glu Gly Leu Ile Asp Lys Val Asn |     |    |     |    |     |     |
|   | 195 |    | 200 |    | 205 |     |
| Glu Leu Lys Leu Asp Asp Asn Glu Ala Leu Ile Glu Lys Leu Lys His |     |    |     |    |     |     |
|   | 210 |    | 215 |    | 220 |     |
| Gly Gln Phe Thr Leu Arg Asp Met Tyr Glu Gln Phe Gln Asn Ile Met |     |    |     |    |     |     |
|   | 225 |    | 230 |    | 235 | 240 |
| Lys Met Gly Pro Phe Ser Gln Ile Leu Gly Met Ile Pro Gly Phe Gly |     |    |     |    |     |     |
|   | 245 |    | 250 |    | 255 |     |
| Thr Asp Phe Met Ser Lys Gly Asn Glu Gln Glu Ser Met Ala Arg Leu |     |    |     |    |     |     |
|   | 260 |    | 265 |    | 270 |     |
| Lys Lys Leu Met Thr Ile Met Asp Ser Met Asn Asp Gln Glu Leu Asp |     |    |     |    |     |     |
|   | 275 |    | 280 |    | 285 |     |
| Ser Thr Asp Gly Ala Lys Val Phe Ser Lys Gln Pro Gly Arg Ile Gln |     |    |     |    |     |     |
|   | 290 |    | 295 |    | 300 |     |
| Arg Val Ala Arg Gly Ser Gly Val Ser Thr Arg Asp Val Gln Glu Leu |     |    |     |    |     |     |
|   | 305 |    | 310 |    | 315 | 320 |
| Leu Thr Gln Tyr Thr Lys Phe Ala Gln Met Val Lys Lys Met Gly Gly |     |    |     |    |     |     |
|   | 325 |    | 330 |    | 335 |     |
| Ile Lys Gly Leu Phe Lys Gly Gly Asp Met Ser Lys Asn Val Ser Gln |     |    |     |    |     |     |

## 4374

340 345 350  
 Ser Gln Met Ala Lys Leu Asn Gln Gln Met Ala Lys Met Met Asp Pro  
 355 360 365  
 Arg Val Leu His His Met Gly Gly Met Ala Gly Leu Gln Ser Met Met  
 370 375 380  
 Arg Gln Phe Gln Gln Gly Ala Ala Gly Asn Met Lys Gly Met Met Gly  
 385 390 395 400  
 Phe Asn Asn Met

<210> 4816  
 <211> 66  
 <212> PRT  
 <213> Homo sapiens

<400> 4816  
 Ser Leu Ile Ser Leu Tyr Phe Ser Phe Phe Val Cys Glu Tyr Tyr Pro  
 1 5 10 15  
 Tyr Thr Thr Thr Pro Lys Thr Ser Glu Leu Phe Ala Leu Phe Phe His  
 20 25 30  
 Thr Thr Trp Gly Arg Glu Pro Trp Glu Tyr Ala His Gly Ile Ile Ile  
 35 40 45  
 His Ser Val Val Trp Lys Lys Lys Met Leu Thr Ser Ala Leu Glu Gly  
 50 55 60  
 Ser Tyr  
 65

<210> 4817  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 4817  
 His Ala Ser Ala Asp Ala Trp Ala Asp Ala Trp Glu Lys Ser Cys Glu  
 1 5 10 15  
 Glu Ile Asp Leu Asp Lys His Lys Ser Ile Gln Arg Lys Lys Thr Glu  
 20 25 30

## 4375

Val Glu Ile Glu Thr Val His Val Ser Thr Glu Lys Leu Lys Asn Arg  
35 40 45

Lys Glu Lys Lys Ser Arg Asp Val Val Ser Lys Lys Glu Glu Arg Lys  
50 55 60

Arg Thr Lys Lys Lys Lys Glu Gln Gly Gln Glu Arg Thr Glu Glu Glu  
65 70 75 80

Met Leu Trp Asp Gln Ser Ile Leu Gly Phe  
85 90

<210> 4818

<211> 154

<212> PRT

<213> Homo sapiens

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

<222> (13)

<223> Xaa equals any of the naturally occurring L-amino acids

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

<222> (117)

<223> Xaa equals any of the naturally occurring L-amino acids

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

 $\langle 222 \rangle$  (126)

<223> Xaa equals any of the naturally occurring L-amino acids

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

<222> (139)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4818

Gly Gly Phe Leu His Pro Gln Pro Glu Arg Arg Pro Xaa Gly Pro Ala  
1 5 10 15

Pro Arg Lys Pro Pro Val Ala Arg Pro Arg Ser Gly Leu Gly Ser Pro  
20 25 30

Gly Lys Arg Phe Gly Arg Ala His Gly Asp Cys Val Ser Gly Ala Gln  
35 40 45

Leu Cys Gly Cys Pro Ser Met Asp Asp Tyr Met Val Leu Arg Met Ile  
50 55 60

## 4376

Gly Glu Gly Ser Phe Gly Arg Ala Leu Leu Val Gln His Glu Ser Ser  
 65 70 75 80

Asn Gln Met Phe Ala Met Lys Glu Ile Arg Leu Pro Lys Ser Phe Ser  
 85 90 95

Asn Thr Gln Asn Ser Arg Lys Glu Ala Val Leu Leu Ala Lys Met Lys  
 100 105 110

His Pro Asn Ile Xaa Ala Phe Lys Glu Ser Phe Glu Ala Xaa Gly His  
 115 120 125

Leu Tyr Ile Val Met Glu Tyr Cys Asp Gly Xaa Asp Leu Met Gln Lys  
 130 135 140

Ile Lys Gln Gln Lys Arg Lys Val Ile Ser  
 145 150

<210> 4819

<211> 63

<212> PRT

<213> Homo sapiens

<400> 4819

Arg Leu His Arg Tyr Pro Glu Ala Met Ala Ser Lys Gly Leu Gln Asp  
 1 5 10 15

Leu Lys Gln Gln Val Glu Gly Thr Ala Gln Glu Ala Ala Met Asp Gln  
 20 25 30

Leu Ala Lys Thr Thr Gln Glu Thr Ile Asp Lys Thr Ala Asn Gln Ala  
 35 40 45

Ser Asp Thr Phe Ser Gly Ile Gly Lys Lys Phe Gly Leu Leu Lys  
 50 55 60

<210> 4820

<211> 261

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (146)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4377

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (226)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4820

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Lys | Lys | Asp | Thr | Leu | Thr | Glu | Glu | Glu | Thr | Gln | Phe | Tyr | Ile | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Val | Leu | Ala | Ile | Asp | Ser | Ile | His | Gln | Leu | Gly | Phe | Ile | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asp | Ile | Lys | Pro | Asp | Asn | Leu | Leu | Leu | Asp | Ser | Lys | Gly | His | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Leu | Ser | Asp | Phe | Gly | Leu | Cys | Thr | Gly | Leu | Lys | Lys | Ala | His | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Glu | Phe | Tyr | Arg | Asn | Leu | Asn | His | Ser | Leu | Pro | Ser | Asp | Phe | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gln | Asn | Met | Asn | Ser | Lys | Arg | Lys | Ala | Glu | Thr | Trp | Lys | Arg | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Arg | Gln | Leu | Ala | Phe | Ser | Thr | Val | Gly | Thr | Pro | Asp | Tyr | Ile | Ala |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Val | Phe | Met | Gln | Thr | Gly | Tyr | Asn | Lys | Leu | Cys | Asp | Trp | Trp |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Gly | Val | Ile | Met | Tyr | Glu | Met | Leu | Ile | Gly | Tyr | Pro | Pro | Phe |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Xaa | Glu | Thr | Pro | Gln | Glu | Thr | Tyr | Lys | Lys | Val | Met | Asn | Trp | Lys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Leu | Thr | Phe | Pro | Pro | Glu | Val | Pro | Ile | Ser | Glu | Lys | Ala | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Ile | Leu | Arg | Phe | Cys | Cys | Glu | Trp | Glu | His | Arg | Ile | Gly | Ala |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Val | Glu | Glu | Ile | Lys | Ser | Asn | Ser | Phe | Phe | Glu | Gly | Val | Asp |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Glu | His | Ile | Arg | Glu | Arg | Pro | Ala | Ala | Ile | Ser | Ile | Glu | Ile | Lys |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Xaa | Asp | Asp | Thr | Ser | Asn | Phe | Asp | Glu | Phe | Pro | Glu | Ser | Asp | Ile |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

## 4378

Leu Lys Pro Thr Asp Ala Phe Leu Gly Asp Thr Pro Pro His Pro Lys  
                           245                          250                          255

Gly Ser Pro Ala Thr  
                           260

<210> 4821

<211> 178

<212> PRT

<213> Homo sapiens

<400> 4821

Phe Arg Ala Leu His Arg Gly Ala Ala Leu Asp Leu Ser Pro Leu His  
   1                          5                          10                          15

Arg Ser Pro His Pro Ser Arg Gln Ala Ile Phe Cys Trp Met Ser Phe  
                           20                          25                          30

Ser Ala Tyr Gln Thr Ala Phe Ile Cys Leu Gly Leu Leu Val Gln Gln  
                           35                          40                          45

Ile Ile Phe Phe Leu Gly Thr Thr Ala Leu Ala Phe Leu Val Leu Met  
   50                          55                          60

Pro Val Leu His Gly Arg Asn Leu Leu Leu Phe Arg Ser Leu Glu Ser  
   65                          70                          75                          80

Ser Trp Pro Phe Trp Leu Thr Leu Ala Leu Ala Val Ile Leu Gln Asn  
                           85                          90                          95

Met Ala Ala His Trp Val Phe Leu Glu Thr His Asp Gly His Pro Gln  
                           100                          105                          110

Leu Thr Asn Arg Arg Val Leu Tyr Ala Ala Thr Phe Leu Leu Phe Pro  
                           115                          120                          125

Leu Asn Val Leu Val Gly Ala Met Val Ala Thr Trp Arg Val Leu Leu  
   130                          135                          140

Ser Ala Leu Tyr Asn Ala Ile His Leu Gly Gln Met Asp Leu Ser Leu  
   145                          150                          155                          160

Leu Pro Pro Arg Ala Ala Leu Ser Thr Pro Ala Thr Thr Arg Thr Glu  
                           165                          170                          175

Thr Ser

## 4379

&lt;210&gt; 4822

&lt;211&gt; 178

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (28)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (36)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4822

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Ala | Gly | Thr | Gly | Pro | Glu | Phe | Pro | Gly | Arg | Pro | Thr | Arg | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ile | Phe | Pro | Val | Asp | Asn | Ala | Ile | Asp | Asn | Xaa | Lys | Glu | Ile | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | Leu | Xaa | Ile | Leu | Met | Ala | Ala | Tyr | Ala | Met | Ala | Glu | Ala | Phe |
|     |     |     | 35  |     |     |     | 40  |     |     |     | 45  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Thr | Gly | Val | Gly | Ala | Ser | Leu | Ile | Leu | Ile | Ala | Leu | Lys | Val |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ile | Thr | Ala | Lys | Thr | Val | Ala | Val | Ile | Gly | Ala | Ile | Val | Thr | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Ser | Ile | Ala | Thr | Gly | Thr | Ser | Trp | Gly | Thr | Phe | Ala | Ala | Cys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Ile | Phe | Leu | Trp | Leu | Asn | His | Ile | Val | Gly | Gly | Asn | Ile | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Thr | Ala | Ala | Ile | Ala | Gly | Gly | Ala | Cys | Phe | Gly | Asp | Asn | Ile |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Ile | Ser | Asp | Thr | Thr | Ile | Val | Ser | Ser | Gly | Ile | Gln | Lys | Val |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Val | Arg | Arg | Ile | Arg | His | Gln | Gly | Val | Trp | Ser | Ala | Leu | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Ser | Gly | Ile | Ile | Val | Phe | Ala | Ile | Val | Gly | Phe | Thr | Trp | Ile |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

Tyr Pro



4380

<210> 4823

<211> 40

<212> PRT

<213> Homo sapiens

<400> 4823

Leu Cys Cys Phe Lys Tyr Leu Gly Asp Cys Phe Ile Ile Ser Ser Thr  
1 5 10 15

Lys Lys Thr Phe Asn Phe Ala Ile Glu Thr Val Glu Leu Cys His Ala  
20 25 30

Phe Ile Arg Ser Ser Ala Leu Cys  
35 40

<210> 4824

<211> 69

&lt;212&gt; PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

<222> (48)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

&lt;221&gt; SITE

&lt;222&gt; (69)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4824

Thr Gln Leu Arg Glu Cys Leu Phe Arg Ala Trp Ser Cys Tyr Leu Tyr  
1 5 10 15

Leu Lys Ser Ser His Pro Val Pro Cys Phe Arg Ala Gly Leu Gln Phe  
20 25 30

His Cys Ser Phe Leu Lys Leu Leu Cys Pro Gln Leu Thr Leu Phe Xaa  
35 40 45

Asn Val Val Phe His Trp Thr Gly Leu Leu Phe Leu Val Ser His Ala  
50 55 60

Phe Gly Phe Tyr Xaa  
65

4381

&lt;210&gt; 4825

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (39)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4825

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Arg | Pro | Ala | Gly | Lys | Asp | Met | Met | Arg | Lys | Leu | Glu | Lys | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Ala | Xaa | Lys | Gly | Pro | Met | Ile | Val | Leu | Val | Leu | Asp | Glu | Met |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gln | Leu | Asp | Ser | Lys | Xaa | Gln | Asp | Val | Leu | Tyr | Thr | Leu | Phe | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Pro | Trp | Leu | Ser | Asn | Ser | His | Leu | Val | Leu | Ile | Gly | Ile | Ala | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Asp | Leu | Thr | Asp | Arg | Ile | Leu | Pro | Arg | Leu | Gln | Ala | Arg | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Lys | Pro | Gln | Leu | Leu | Asn | Phe | Pro | Pro | Tyr | Thr | Arg | Asn | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Val | Thr | Ile | Leu | Gln | Asp | Arg | Leu | Asn | Gln | Val | Ser | Arg | Asp | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Asp | Asn | Ala | Ala | Val | Gln | Phe | Cys | Ala | Arg | Lys | Val | Ser | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Gly | Asp | Val | Arg | Lys | Ala | Leu | Asp | Val | Cys | Arg | Arg | Ala | Ile |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ile | Val | Glu | Ser | Asp | Val | Lys | Ser | Gln | Thr | Ile | Leu | Lys | Pro | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Glu | Cys | Lys | Ser | Pro | Ser | Glu | Pro | Leu | Ile | Pro | Lys | Arg | Val | Gly |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

## 4382

Leu Ile His Ile Ser Gln Val Ile Ser Glu Val Asp Gly Asn Arg Met  
                   180                  185                  190

Thr Leu Ser Gln Glu Gly Ala Gln Asp Ser Phe Pro Leu Gln Gln Lys  
                   195                  200                  205

Ile Leu Val Cys Ser Leu Met Leu Leu Ile Arg Gln Leu Lys Ile Lys  
                   210                  215                  220

Glu Val Thr Leu Gly Lys Leu Tyr Glu Ala Tyr Ser Lys Val Cys Arg  
                   225                  230                  235                  240

Lys Gln Gln Val Ala Ala Val Asp Gln Ser Glu Cys Leu Ser Leu Ser  
                   245                  250                  255

Gly Leu Leu Glu Ala Arg Gly Ile Leu Gly Leu Lys Arg Asn Lys Glu  
                   260                  265                  270

Thr Arg Leu Thr Lys Val Phe Phe Lys Ile Glu Glu Lys Glu Ile Glu  
                   275                  280                  285

His Ala Leu Lys Asp Lys Ala Leu Ile Gly Asn Ile Leu Ala Thr Gly  
                   290                  295                  300

Leu Pro  
                   305

<210> 4826

<211> 127

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (22)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4826

Ala Ala Ala Gly Pro Gly Ala Cys Trp Ala Ser Pro Pro Arg Arg Leu  
                   1                  5                  10                  15

His Ala Pro Thr Ala Xaa Ser Thr Xaa Ser Phe Gln Ala Arg Gln Leu  
                   20                  25                  30

## 4383

Leu Glu Lys Glu Phe Ser Asn Leu Ile Ser Leu Gly Thr Asp Arg Arg  
                   35                                  40                                  45

Leu Asp Glu Asp Ser Ala Lys Ser Phe Ser Arg Ser Pro Ser Trp Arg  
           50                                  55                                  60

Lys Met Phe Arg Glu Lys Asp Leu Arg Gly Val Thr Pro Asp Ser Ala  
       65                                  70                                  75                                  80

Glu Met Leu Pro Pro Asn Phe Arg Ser Ala Ala Ala Gly Ala Leu Gly  
                                   85                                  90                                  95

Ser Pro Gly Leu Pro Leu Arg Lys Leu Gln Pro Glu Gly Gln Thr Ser  
                   100                                  105                                  110

Gly Ser Ser Arg Ala Asp Gly Val Ser Val Arg Thr Tyr Ser Cys  
                   115                                  120                                  125

<210> 4827

<211> 78

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (76)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4827

Glu Ala Ala Asn Met Ile Leu Val Asp Asp Asp Phe Ser Ala Ile Met  
       1                                  5                                  10                                  15

Asn Ala Val Glu Glu Gly Lys Gly Ile Phe Tyr Asn Ile Lys Asn Phe  
                   20                                  25                                  30

Val Arg Phe Gln Leu Ser Thr Ser Ile Ser Ala Leu Ser Leu Ile Thr  
                   35                                  40                                  45

Leu Ser Thr Val Phe Asn Leu Pro Ser Pro Leu Asn Ala Met Gln Ile  
       50                                  55                                  60

Leu Trp Ile Asn Ile Ile Met Asp Gly Pro Pro Xaa Gln Arg  
       65                                  70                                  75

<210> 4828

<211> 61

## 4384

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4828

```

Asn Ile Val Cys Ser Asp Phe Ile Lys Asp Ile Phe Lys Ser Pro Ile
 1             5             10             15

Tyr Ser Arg Ile Phe Ser Tyr Asp Val Ile Tyr Glu Lys Asp Val Cys
          20             25             30

Thr Asn Arg Cys Cys Asn Thr Thr Val Val Gly Phe Tyr Cys Leu Val
          35             40             45

Ile Asn Val Tyr Asn Ile Ser Lys Gly Asn Tyr Val Leu
      50             55             60

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&lt;210&gt; 4829

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (24)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4829

```

Ala Leu Trp Gly Asp Ala Ser Gly Gln Ser Cys Leu Leu Ile Phe Ile
 1             5             10             15

Leu Arg Ala Ser Ala Leu Glu Xaa Leu Pro His Ala Phe Ser Val Asp
          20             25             30

His Ser Gly Pro Pro Val Gly Val Ala Cys Gln Ala Arg Thr Pro Pro
          35             40             45

Gly Gly Gln Ser Arg Asn Leu Arg Gly Ala Glu Thr Pro Phe Ile Ser
      50             55             60

Gly Cys His Arg Pro Glu Gln His Trp Ala Gly Cys Pro Leu Leu Thr
      65             70             75             80

Gly Trp Gln His Lys Asp Asn Met Ser Arg Gly Arg Arg Arg Arg Gly
          85             90             95

Ala Gln Ala Ala Gly His Ser Pro Ala Ala Pro Glu Ala Leu Ile Ser
          100             105             110

Asp His Gln Ala Met Thr Phe Leu Cys Ala Leu Gln Lys Ala Phe Asn

```

## 4385

|   |     |     |
|---|-----|-----|
| 115   | 120 | 125 |
| Cys Asp Gln Ala Val Cys Ser Asp Thr Leu Ser Gly Asp Phe |     |     |
| 130   | 135 | 140 |

<210> 4830

<211> 163

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (20)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (61)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (65)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (79)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (100)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (113)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (114)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4830

|   |   |    |
|---|---|----|
| Gly Pro Arg His Ala Asp Phe Pro Cys Ser Ala Val Val Arg Lys Cys |   |    |
| 1   | 5 | 10 |
|   |   | 15 |

## 4386

Leu Ala Ala Xaa Gly Arg Arg Arg Gly Arg Gln Thr Tyr Ser Arg Phe  
                   20                                  25                                  30  
 Gln Thr Leu Glu Leu Glu Lys Glu Phe Leu Phe Asn Pro Tyr Leu Thr  
                   35                                  40                                  45  
 Arg Lys Arg Arg Ile Glu Val Ser His Ala Leu Ala Xaa Thr Glu Arg  
                   50                                  55                                  60  
 Xaa Val Lys Ile Trp Phe Gln Asn Arg Arg Met Asn Gly Lys Xaa Lys  
                   65                                  70                                  75                                  80  
 Thr Thr Arg Gln Ile Ser Arg Phe Pro Ala Gly Gly Glu Gly Arg Gly  
                                   85                                  90                                  95  
 Asn Glu Lys Xaa Ser Pro Arg Ala Gly Gly Arg Gln Ser Arg Arg Pro  
                   100                                  105                                  110  
 Xaa Xaa Leu Thr Ser Thr Phe Lys Ile Tyr His Arg Leu Leu Lys Leu  
                   115                                  120                                  125  
 Ile Ile Thr Ile Cys Cys Gly His His Leu Phe Ser Leu Leu Glu Arg  
                   130                                  135                                  140  
 Thr Leu Pro Val Phe Gln Ala Thr Phe Met Ser Leu Leu Leu Arg Phe  
                   145                                  150                                  155                                  160  
 Ser Val Leu

&lt;210&gt; 4831

&lt;211&gt; 183

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (11)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4387

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (30)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4831

Glu Leu Lys Arg Leu Thr Ile Gly Lys Asn Xaa Xaa Arg Leu Thr Gly  
 1 5 10 15

Asn Arg Xaa Gly Ile Pro Gly Ser Thr His Ala Ser Glu Xaa Glu Val  
 20 25 30

Glu Glu Glu Gly Asp Val Asp Ser Asp Glu Glu Glu Glu Glu Asp Glu  
 35 40 45

Glu Ser Ser Ser Glu Gly Leu Glu Ala Glu Asp Trp Ala Gln Gly Val  
 50 55 60

Val Glu Ala Gly Gly Ser Phe Gly Ala Tyr Gly Ala Gln Glu Glu Ala  
 65 70 75 80

Gln Cys Pro Thr Leu His Phe Leu Glu Gly Gly Glu Asp Ser Asp Ser  
 85 90 95

Asp Ser Glu Glu Glu Asp Asp Glu Glu Glu Asp Asp Glu Asp Glu Asp  
 100 105 110

Asp Asp Asp Asp Glu Glu Asp Gly Asp Glu Val Pro Val Pro Ser Phe  
 115 120 125

Gly Glu Ala Met Ala Tyr Phe Ala Met Val Lys Arg Tyr Leu Thr Ser  
 130 135 140

Phe Pro Ile Asp Asp Arg Val Gln Ser His Ile Leu His Leu Glu His  
 145 150 155 160

Asp Leu Val His Val Thr Arg Lys Asn His Ala Arg Gln Ala Gly Val  
 165 170 175

Arg Gly Leu Gly His Gln Ser  
 180

&lt;210&gt; 4832

&lt;211&gt; 313

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4832



## 4388

Gly Arg Phe Gln Lys Cys Leu Ala Val Gly Met Ser His Asn Ala Ile  
 1 5 10 15  
 Arg Phe Gly Arg Met Pro Gln Ala Glu Lys Glu Lys Leu Leu Ala Glu  
 20 25 30  
 Ile Ser Ser Asp Ile Asp Gln Leu Asn Pro Glu Ser Ala Asp Leu Arg  
 35 40 45  
 Ala Leu Ala Lys His Leu Tyr Asp Ser Tyr Ile Lys Ser Phe Pro Leu  
 50 55 60  
 Thr Lys Ala Lys Ala Arg Ala Ile Leu Thr Gly Lys Thr Thr Asp Lys  
 65 70 75 80  
 Ser Pro Phe Val Ile Tyr Asp Met Asn Ser Leu Met Met Gly Glu Asp  
 85 90 95  
 Lys Ile Lys Phe Lys His Ile Thr Pro Leu Gln Glu Gln Ser Lys Glu  
 100 105 110  
 Val Ala Ile Arg Ile Phe Gln Gly Cys Gln Phe Arg Ser Val Glu Ala  
 115 120 125  
 Val Gln Glu Ile Thr Glu Tyr Ala Lys Ser Ile Pro Gly Phe Val Asn  
 130 135 140  
 Leu Asp Leu Asn Asp Gln Val Thr Leu Leu Lys Tyr Gly Val His Glu  
 145 150 155 160  
 Ile Ile Tyr Thr Met Leu Ala Ser Leu Met Asn Lys Asp Gly Val Leu  
 165 170 175  
 Ile Ser Glu Gly Gln Gly Phe Met Thr Arg Glu Phe Leu Lys Ser Leu  
 180 185 190  
 Arg Lys Pro Phe Gly Asp Phe Met Glu Pro Lys Phe Glu Phe Ala Val  
 195 200 205  
 Lys Phe Asn Ala Leu Glu Leu Asp Asp Ser Asp Leu Ala Ile Phe Ile  
 210 215 220  
 Ala Val Ile Ile Leu Ser Gly Asp Arg Pro Gly Leu Leu Asn Val Lys  
 225 230 235 240  
 Pro Ile Glu Asp Ile Gln Asp Asn Leu Leu Gln Ala Leu Glu Leu Gln  
 245 250 255  
 Leu Lys Leu Asn His Pro Glu Ser Ser Gln Leu Phe Ala Lys Leu Leu  
 260 265 270

## 4389

Gln Lys Met Thr Asp Leu Arg Gln Ile Val Thr Glu His Val Gln Leu  
 275 280 285

Leu Gln Val Ile Lys Lys Thr Glu Thr Asp Met Ser Leu His Pro Leu  
 290 295 300

Leu Gln Glu Ile Tyr Lys Asp Leu Tyr  
 305 310

<210> 4833

<211> 187

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (10)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4833

Lys Ser Gly Ile Leu Val Asn Asn Val Xaa Met Ser Tyr Glu Tyr Pro  
 1 5 10 15

Glu Tyr Phe Leu Asp Val Pro Asp Leu Asp Asn Val Ile Lys Lys Met  
 20 25 30

Ile Asn Ile Asn Ile Leu Ser Val Cys Lys Met Thr Gln Leu Val Leu  
 35 40 45

Pro Gly Met Val Glu Arg Ser Lys Gly Ala Ile Leu Asn Ile Ser Ser  
 50 55 60

Gly Ser Gly Met Leu Pro Val Pro Leu Leu Thr Ile Tyr Ser Ala Thr  
 65 70 75 80

Lys Thr Phe Val Asp Phe Phe Ser Gln Cys Leu His Glu Glu Tyr Arg  
 85 90 95

Ser Lys Gly Val Phe Val Gln Ser Val Leu Pro Tyr Phe Val Ala Thr  
 100 105 110

Lys Leu Ala Lys Ile Arg Lys Pro Thr Leu Asp Lys Pro Ser Pro Glu  
 115 120 125

Thr Phe Val Lys Ser Ala Ile Lys Thr Val Gly Leu Gln Ser Arg Thr  
 130 135 140

Asn Gly Tyr Leu Ile His Ala Leu Met Gly Ser Ile Ile Ser Asn Leu  
 145 150 155 160

## 4390

Pro Ser Trp Ile Tyr Leu Lys Ile Val Met Asn Met Asn Lys Ser Thr  
 165 170 175

Arg Ala His Tyr Leu Lys Lys Thr Lys Lys Asn  
 180 185

<210> 4834

<211> 99

<212> PRT

<213> Homo sapiens

<400> 4834

Ser Ile Glu Phe Ser Gly His Leu Phe Phe Pro Leu Pro Leu Leu Arg  
 1 5 10 15

Pro Ser Pro Pro Leu Ile Ile Ile Gln Val Val Val Lys Ile Val Leu  
 20 25 30

Leu Ser Asp Pro Phe Leu Val Trp Leu Phe Ile Pro Ser Glu Gln Val  
 35 40 45

Asn Val Gly Ala Thr Ala Leu Val Ser Thr Val Ser Leu Thr Val Asn  
 50 55 60

Glu Pro Pro Gly Val Ser Ser Lys Lys Arg Lys Gly Val Thr Gly Thr  
 65 70 75 80

Thr Ala Leu Phe His Phe Ile Asn Cys Leu Phe Met Leu Pro Ala Gln  
 85 90 95

Val Ser Thr

<210> 4835

<211> 301

<212> PRT

<213> Homo sapiens

<400> 4835

Leu Arg Val Phe Leu Cys Val Phe Phe Tyr Phe Ala Trp Leu Phe Glu  
 1 5 10 15

His Tyr Trp Thr Leu Val Leu Glu Gly Lys Thr Phe Gln Leu Tyr Ser  
 20 25 30

His Asn Leu Ile Ala Leu Phe Glu His Ala Lys Lys Pro Gly Leu Ala

## 4391

|   |         |       |
|---|---------|-------|
| 35  | 40      | 45    |
| Ala His Ile Gln Thr His Arg Phe Pro Asp Arg Ile Leu Pro Arg Lys |         |       |
| 50  | 55      | 60    |
| Phe Ala Leu Thr Thr Lys Ile Pro Asp Thr Lys Gly Cys His Lys Cys |         |       |
| 65  | 70      | 75 80 |
| Cys Ile Val Arg Asn Pro Tyr Thr Gly His Lys Tyr Leu Cys Gly Ala |         |       |
|   | 85 90   | 95    |
| Leu Gln Ser Gly Ile Val Leu Leu Gln Trp Tyr Glu Pro Met Gln Lys |         |       |
|   | 100 105 | 110   |
| Phe Met Leu Ile Lys His Phe Asp Phe Pro Leu Pro Ser Pro Leu Asn |         |       |
|   | 115 120 | 125   |
| Val Phe Glu Met Leu Val Ile Pro Glu Gln Glu Tyr Pro Met Val Cys |         |       |
|   | 130 135 | 140   |
| Val Ala Ile Ser Lys Gly Thr Glu Ser Asn Gln Val Val Gln Phe Glu |         |       |
| 145   | 150 155 | 160   |
| Thr Ile Asn Leu Asn Ser Ala Ser Ser Trp Phe Thr Glu Ile Gly Ala |         |       |
|   | 165 170 | 175   |
| Gly Ser Gln Gln Leu Asp Ser Ile His Val Thr Gln Leu Glu Arg Asp |         |       |
|   | 180 185 | 190   |
| Thr Val Leu Val Cys Leu Asp Lys Phe Val Lys Ile Val Asn Leu Gln |         |       |
|   | 195 200 | 205   |
| Gly Lys Leu Lys Ser Ser Lys Lys Leu Ala Ser Glu Leu Ser Phe Asp |         |       |
|   | 210 215 | 220   |
| Phe Arg Ile Glu Ser Val Val Cys Leu Gln Asp Ser Val Leu Ala Phe |         |       |
| 225   | 230 235 | 240   |
| Trp Lys His Gly Met Gln Gly Lys Ser Phe Lys Ser Asp Glu Val Thr |         |       |
|   | 245 250 | 255   |
| Gln Glu Ile Ser Asp Glu Thr Arg Val Phe Arg Leu Leu Gly Ser Asp |         |       |
|   | 260 265 | 270   |
| Arg Val Val Val Leu Glu Ser Arg Pro Thr Glu Asn Pro Thr Ala His |         |       |
|   | 275 280 | 285   |
| Ser Asn Leu Tyr Ile Leu Ala Gly His Glu Asn Ser Tyr             |         |       |
| 290   | 295 300 |       |

## 4392

<210> 4836  
 <211> 355  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (342)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (348)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (351)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (352)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4836  
 Phe Pro Gly Ser Gly Asn Met Ala Lys Asp Ala Gly Leu Ile Glu Ala  
     1                    5                    10                    15  
 Asn Gly Glu Leu Lys Val Phe Ile Asp Gln Asn Leu Ser Pro Gly Lys  
                     20                    25                    30  
 Gly Val Val Ser Leu Val Ala Val His Pro Ser Thr Val Asn Pro Leu  
                     35                    40                    45  
 Gly Lys Gln Leu Leu Pro Lys Thr Phe Gly Gln Ser Asn Val Asn Ile  
                     50                    55                    60  
 Ala Gln Gln Val Val Ile Gly Thr Pro Gln Arg Pro Ala Ala Ser Asn  
     65                    70                    75                    80  
 Thr Leu Val Val Gly Ser Pro His Thr Pro Ser Thr His Phe Ala Ser  
                     85                    90                    95  
 Gln Asn Gln Pro Ser Asp Ser Ser Pro Trp Ser Ala Gly Lys Arg Asn  
                     100                    105                    110  
 Arg Lys Gly Glu Lys Asn Gly Lys Gly Leu Arg His Phe Ser Met Lys  
                     115                    120                    125

## 4393

Val Cys Glu Lys Val Gln Arg Lys Gly Thr Thr Ser Tyr Asn Glu Val  
 130 135 140  
 Ala Asp Glu Leu Val Ala Glu Phe Ser Ala Ala Asp Asn His Ile Leu  
 145 150 155 160  
 Pro Asn Glu Ser Ala Tyr Asp Gln Lys Asn Ile Arg Arg Arg Val Tyr  
 165 170 175  
 Asp Ala Leu Asn Val Leu Met Ala Met Asn Ile Ile Ser Lys Glu Lys  
 180 185 190  
 Lys Glu Ile Lys Trp Ile Gly Leu Pro Thr Asn Ser Ala Gln Glu Cys  
 195 200 205  
 Gln Asn Leu Glu Val Glu Arg Gln Arg Arg Leu Glu Arg Ile Lys Gln  
 210 215 220  
 Lys Gln Ser Gln Leu Gln Glu Leu Ile Leu Gln Gln Ile Ala Phe Lys  
 225 230 235 240  
 Asn Leu Val Gln Arg Asn Arg His Ala Glu Gln Gln Ala Ser Arg Pro  
 245 250 255  
 Pro Pro Pro Asn Ser Val Ile His Leu Pro Phe Ile Ile Val Asn Thr  
 260 265 270  
 Ser Lys Lys Thr Val Ile Asp Cys Ser Ile Ser Asn Asp Lys Phe Glu  
 275 280 285  
 Tyr Leu Phe Asn Phe Asp Asn Thr Phe Glu Ile His Asp Asp Ile Glu  
 290 295 300  
 Val Leu Lys Arg Met Gly Met Ala Cys Gly Leu Glu Ser Gly Ser Cys  
 305 310 315 320  
 Ser Ala Glu Asp Leu Lys Met Ala Arg Ser Leu Val Pro Lys Ala Leu  
 325 330 335  
 Glu Pro Tyr Val Thr Xaa Met Ala Gln Gly Thr Xaa Gly Gly Xaa Xaa  
 340 345 350  
 Leu Cys Gln  
 355

&lt;210&gt; 4837

&lt;211&gt; 263

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4394

&lt;400&gt; 4837

Trp Ile Thr Tyr Gln Gly Phe Leu Ser Gln Trp Thr Leu Thr Thr Tyr  
 1 5 10 15  
 Leu Asp Val Gln Arg Cys Leu Glu Tyr Leu Gly Tyr Leu Gly Tyr Ser  
 20 25 30  
 Ile Leu Thr Glu Gln Glu Ser Gln Ala Ser Ala Val Thr Val Thr Arg  
 35 40 45  
 Asp Lys Lys Ile Asp Leu Gln Lys Lys Gln Thr Gln Arg Asn Val Phe  
 50 55 60  
 Arg Cys Asn Val Ile Gly Val Lys Asn Cys Gly Lys Ser Gly Val Leu  
 65 70 75 80  
 Gln Ala Leu Leu Gly Arg Asn Leu Met Arg Gln Lys Lys Ile Arg Glu  
 85 90 95  
 Asp His Lys Ser Tyr Tyr Ala Ile Asn Thr Val Tyr Val Tyr Gly Gln  
 100 105 110  
 Glu Lys Tyr Leu Leu Leu His Asp Ile Ser Glu Ser Glu Phe Leu Thr  
 115 120 125  
 Glu Ala Glu Ile Ile Cys Asp Val Val Cys Leu Val Tyr Asp Val Ser  
 130 135 140  
 Asn Pro Lys Ser Phe Glu Tyr Cys Ala Arg Ile Phe Lys Gln His Phe  
 145 150 155 160  
 Met Asp Ser Arg Ile Pro Cys Leu Ile Val Ala Ala Lys Ser Asp Leu  
 165 170 175  
 His Glu Val Lys Gln Glu Tyr Ser Ile Ser Pro Thr Asp Phe Cys Arg  
 180 185 190  
 Lys His Lys Met Pro Pro Pro Gln Ala Phe Thr Cys Asn Thr Ala Asp  
 195 200 205  
 Ala Pro Ser Lys Asp Ile Phe Val Lys Leu Thr Thr Met Ala Met Tyr  
 210 215 220  
 Pro His Val Thr Gln Ala Asp Leu Lys Ser Ser Thr Phe Trp Leu Arg  
 225 230 235 240  
 Ala Ser Phe Gly Ala Thr Val Phe Ala Val Leu Gly Phe Ala Met Tyr  
 245 250 255  
 Lys Ala Leu Leu Lys Gln Arg

## 4395

260

&lt;210&gt; 4838

&lt;211&gt; 285

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4838

Gly Arg Met Asn Trp Thr Gly Leu Tyr Thr Leu Leu Ser Gly Val Asn  
 1 5 10 15

Arg His Ser Thr Ala Ile Gly Arg Val Trp Leu Ser Val Ile Phe Ile  
 20 25 30

Phe Arg Ile Met Val Leu Val Val Ala Ala Glu Ser Val Trp Gly Asp  
 35 40 45

Glu Lys Ser Ser Phe Ile Cys Asn Thr Leu Gln Pro Gly Cys Asn Ser  
 50 55 60

Val Cys Tyr Asp Gln Phe Phe Pro Ile Ser His Val Arg Leu Trp Ser  
 65 70 75 80

Leu Gln Leu Ile Leu Val Ser Thr Pro Ala Leu Leu Val Ala Met His  
 85 90 95

Val Ala His Gln Gln His Ile Glu Lys Lys Met Leu Arg Leu Glu Gly  
 100 105 110

His Gly Asp Pro Leu His Leu Glu Glu Val Lys Arg His Lys Val His  
 115 120 125

Ile Ser Gly Thr Leu Trp Trp Thr Tyr Val Ile Ser Val Val Phe Arg  
 130 135 140

Leu Leu Phe Glu Ala Val Phe Met Tyr Val Phe Tyr Leu Leu Tyr Pro  
 145 150 155 160

Gly Tyr Ala Met Val Arg Leu Val Lys Cys Asp Val Tyr Pro Cys Pro  
 165 170 175

Asn Thr Val Asp Cys Phe Val Ser Arg Pro Thr Glu Lys Thr Val Phe  
 180 185 190

Thr Val Phe Met Leu Ala Ala Ser Gly Ile Cys Ile Ile Leu Asn Val  
 195 200 205

Ala Glu Val Val Tyr Leu Ile Ile Arg Ala Cys Ala Arg Arg Ala Gln  
 210 215 220



## 4396

Arg Arg Ser Asn Pro Pro Ser Arg Lys Gly Ser Gly Phe Gly His Arg  
 225 230 235 240

Leu Ser Pro Glu Tyr Lys Gln Asn Glu Ile Asn Lys Leu Leu Ser Glu  
 245 250 255

Gln Asp Gly Ser Leu Lys Asp Ile Leu Arg Arg Ser Pro Gly Thr Gly  
 260 265 270

Ala Gly Leu Ala Glu Lys Ser Asp Arg Cys Ser Ala Cys  
 275 280 285

&lt;210&gt; 4839

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4839

Gly Gln Asp Gly Glu Thr Pro Ser Leu Leu Lys Ile Gln Arg Ile Ser  
 1 5 10 15

Trp Ala Trp Trp Arg Ala Pro Val Ile Pro Ala Thr Arg Glu Ala Glu  
 20 25 30

Ala Arg Glu Ser Leu Glu Pro Arg Arg Trp Arg Leu Gln  
 35 40 45

&lt;210&gt; 4840

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4840

Arg Ala Glu Ser Val Pro Ala His Pro Cys Gly Phe Pro Ala Pro Leu  
 1 5 10 15

Pro Pro Thr Arg Met Met Glu Ser Lys Met Ile Ala Ala Ile His Ser  
 20 25 30

Ser Ser Ala Asp Ala Thr Ser Ser Ser Asn Tyr His Ser Phe Val Thr  
 35 40 45

Ala Ser Ser Thr Ser Val Asp Asp Ala Leu Pro Leu Pro Leu Pro Val  
 50 55 60

Pro Gln Pro Lys His Ala Ser Gln Lys Thr Val Tyr Ser Ser Phe Ala

## 4397

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Arg | Pro | Asp | Val | Thr | Thr | Glu | Pro | Phe | Gly | Pro | Asp | Asn | Cys | Leu | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Asn | Met | Thr | Pro | Asn | Cys | Gln | Tyr | Arg | Pro | Gln | Ser | Val | Pro | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| His | His | Asn | Lys | Leu | Glu | Gln | His | Gln | Val | Tyr | Gly | Ala | Arg | Ser | Glu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Pro | Pro | Ala | Ser | Met | Gly | Leu | Arg | Tyr | Asn | Thr | Tyr | Val | Ala | Pro | Gly |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Arg | Asn | Ala | Ser | Gly | His | His | Ser | Lys | Pro | Cys | Ser | Arg | Val | Glu | Tyr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Val | Ser | Ser | Leu | Ser | Ser | Ser | Val | Arg | Asn | Thr | Cys | Tyr | Pro | Glu | Asp |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Ile | Pro | Pro | Tyr | Pro | Thr | Ile | Arg | Arg | Val | Gln | Ser | Leu | His | Ala | Pro |
|     |     |     | 180 |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Pro | Ser | Ser | Met | Ile | Arg | Ser | Val | Pro | Ile | Ser | Arg | Thr | Glu | Val | Pro |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Pro | Asp | Asp | Glu | Pro | Ala | Tyr | Cys | Pro | Arg | Pro | Leu | Tyr | Gln | Tyr | Lys |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Pro | Tyr | Gln | Ser | Ser | Gln | Ala | Arg | Ser | Asp | Tyr | His | Val | Thr | Gln | Leu |
| 225 |     |     |     |     | 230 |     |     |     | 235 |     |     |     |     |     | 240 |
| Gln | Pro | Tyr | Phe | Glu | Asn | Gly | Arg | Val | His | Tyr | Arg | Tyr | Ser | Pro | Tyr |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ser | Ser | Ser | Ser | Ser | Ser | Tyr | Tyr | Ser | Pro | Asp | Gly | Ala | Leu | Cys | Asp |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Val | Asp | Ala | Tyr | Gly | Gln | Ser | Ser |     |     |     |     |     |     |     |     |
|     | 275 |     |     |     |     | 280 |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 4841

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (39)

## 4398

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4841

Ala Met Lys Asn Asn Asn Ile Lys Pro Tyr Gly Leu Ile Leu Lys Phe  
1 5 10 15

Ile Ile Leu Ile Gln Lys Leu Pro His Thr Lys Val Thr Glu Leu Pro  
20 25 30

Tyr Val Ser His Ile Val Xaa Glu His Lys Thr Leu Thr Thr Pro Leu  
35 40 45

Ile Val Ser Thr Leu Phe Cys Lys Tyr Ser Glu Tyr Phe Gly Phe Ile  
50 55 60

Leu Ser Arg Ile Phe Val Phe Asn Phe Ala Asn Glu Ile Phe Asn Asn  
65 70 75 80

<210> 4842

<211> 85

&lt;212&gt; PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

&lt;222&gt; (83)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4842

Pro Ala Lys Gly Lys Lys Lys Cys Ser Pro His Ser Cys Lys Gly Leu  
1 5 10 15

Gln Leu Ala Thr Ala Asn Arg Lys Ile Lys Met Ile Glu Pro Phe Gly  
20 25 30

Asn Gln Tyr Ile Val Ala Arg Pro Val Tyr Ser Thr Asn Ala Phe Glu  
35 40 45

Glu Asn His Lys Lys Thr Gly Arg His His Lys Thr Phe Leu Asp His  
50 55 60

Leu Lys Val Cys Cys Asn Cys Ser Pro Gln Lys Ala Arg Glu Leu Ser  
65 70 75 80

Ser Leu Xaa Phe Pro  
85

## 4399

&lt;210&gt; 4843

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4843

Leu Ser Ala Cys Phe Ala Tyr His Arg Asp Ile Ser Met Ala Val Pro  
1 5 10 15

Pro Cys Arg Val Ala Tyr Gln Thr Asp Val Asp Cys Xaa Ile Ser Trp  
20 25 30

Gln His Gln Ser Met Gly Cys Leu Thr Phe Trp Tyr Leu Ser Ser Asp  
35 40 45

His Pro Tyr Pro Met Phe Ser Phe Lys His Tyr Pro Ala Ser Leu Phe  
50 55 60

Ile Ile Arg Asn Ser Gly Pro Ser Val Trp Trp His Leu Glu Ser Phe  
65 70 75 80

Val Pro

&lt;210&gt; 4844

&lt;211&gt; 430

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (397)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (417)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4400

&lt;222&gt; (429)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4844

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Pro | Leu | Ile | Glu | Leu | Ser | Asn | Pro | Gly | Ala | Ser | Gly | Ser | Leu | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Val | Thr | Ser | Asp | Asp | Glu | Phe | Ile | Ile | Lys | Thr | Val | Gln | His | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Glu | Phe | Leu | Gln | Lys | Leu | Leu | Pro | Gly | Tyr | Tyr | Met | Asn | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Gln | Asn | Pro | Arg | Thr | Leu | Leu | Pro | Lys | Phe | Tyr | Gly | Leu | Tyr | Cys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Ser | Gly | Gly | Ile | Asn | Ile | Arg | Ile | Val | Val | Met | Asn | Asn | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Arg | Ser | Met | Arg | Met | His | Phe | Thr | Tyr | Asp | Leu | Lys | Gly | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Tyr | Lys | Arg | Arg | Ala | Ser | Arg | Lys | Glu | Arg | Glu | Lys | Ser | Asn | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Phe | Lys | Asp | Leu | Asp | Phe | Leu | Gln | Asp | Met | His | Glu | Gly | Leu | Tyr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Asp | Thr | Glu | Thr | Tyr | Asn | Ala | Leu | Met | Lys | Thr | Leu | Gln | Arg | Asp |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Arg | Val | Leu | Glu | Ser | Phe | Lys | Ile | Met | Asp | Tyr | Ser | Leu | Leu | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ile | His | Phe | Leu | Asp | His | Ser | Leu | Lys | Glu | Lys | Glu | Glu | Glu | Thr |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Asn | Val | Pro | Asp | Ala | Lys | Arg | Thr | Gly | Met | Gln | Lys | Val | Leu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ser | Thr | Ala | Met | Glu | Ser | Ile | Gln | Gly | Pro | Gly | Lys | Ser | Gly | Asp |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ile | Ile | Thr | Glu | Asn | Pro | Asp | Thr | Met | Gly | Gly | Ile | Pro | Ala | Lys |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | His | Arg | Gly | Glu | Lys | Leu | Leu | Leu | Phe | Met | Gly | Ile | Ile | Asp | Ile |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Ser | Tyr | Arg | Leu | Met | Lys | Lys | Leu | Glu | His | Ser | Trp | Lys | Ala |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |

## 4401

Leu Val Tyr Asp Gly Asp Thr Val Ser Val His Arg Pro Ser Phe Tyr  
                   260                  265                  270  
 Ala Asp Arg Phe Leu Lys Phe Met Asn Ser Arg Val Phe Lys Lys Ile  
                   275                  280                  285  
 Gln Ala Leu Lys Ala Ser Pro Ser Lys Lys Arg Cys Asn Ser Ile Ala  
                   290                  295                  300  
 Ala Leu Lys Ala Thr Ser Gln Glu Ile Val Ser Ser Ile Ser Gln Glu  
 305                  310                  315                  320  
 Trp Lys Asp Glu Lys Arg Asp Leu Leu Thr Glu Gly Gln Ser Phe Ser  
                   325                  330                  335  
 Ser Leu Asp Glu Glu Ala Leu Gly Ser Arg His Arg Pro Asp Leu Val  
                   340                  345                  350  
 Pro Ser Thr Pro Ser Leu Phe Glu Ala Ala Ser Leu Ala Thr Thr Ile  
                   355                  360                  365  
 Ser Ser Ser Ser Leu Tyr Val Asn Glu His Tyr Pro His Asp Arg Pro  
                   370                  375                  380  
 Thr Leu Tyr Phe Lys Gln Gln Arg Val Thr Phe Gln Xaa Gln His Phe  
 385                  390                  395                  400  
 Thr Leu Gly Arg Gly Asp Leu Leu Leu Gly Pro Leu Gly Pro Asn Ile  
                   405                  410                  415  
 Xaa Gly Ser Cys Arg Val Thr Leu Phe Leu Trp Phe Xaa Arg  
                   420                  425                  430

&lt;210&gt; 4845

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4845

Lys Ile Val Ser Phe Phe Phe Phe Tyr Arg Lys Leu Ser Leu Cys Asn  
   1                  5                  10                  15  
 Ser Val Ser Phe Arg Phe Leu Ser Cys Phe Cys Lys Leu Trp Glu Arg  
                   20                  25                  30  
 Leu Thr Met Gln Met Cys Gln Arg His Thr Val Gly Cys Asn Ile Asn  
                   35                  40                  45

## 4402

Asn Phe Lys Cys Lys Phe Leu Trp Ile Asn Tyr Phe Tyr Ile Leu  
 50 55 60

<210> 4846

<211> 128

<212> PRT

<213> Homo sapiens

<400> 4846

Ala Cys Pro Arg Pro Arg Thr Pro Asp Pro Ser His Pro Phe Gln Arg  
 1 5 10 15

Pro Arg Ala Arg Pro Trp Thr Glu Leu Leu Val Leu Cys Arg Glu Thr  
 20 25 30

Ile Gln Pro Lys Leu Trp Glu Ala Gln Ser Ile Glu Trp Ala Glu Ala  
 35 40 45

Ala Gly Ala Glu Pro Gly Arg Val Leu Gly Val His Pro Ser Leu Arg  
 50 55 60

Arg Gln Val Pro Gln Gly Pro Thr His Leu Lys Pro Ala Cys Thr Val  
 65 70 75 80

Glu Val Val Glu Val Asp Thr Pro Arg Gly Phe Ser Lys Ala Arg Leu  
 85 90 95

Ala Ala Pro Cys Ser Gly Lys Leu Asn Tyr Ser Arg Phe Arg Ser Ser  
 100 105 110

Val Asp Ser His Gln Ser Gly Gly Val Leu Lys Glu Phe Tyr Val Asp  
 115 120 125

<210> 4847

<211> 175

<212> PRT

<213> Homo sapiens

<400> 4847

His Glu Leu Thr Asp Ala Ala Ser Ile Ala Ala Ala Arg Gly Glu Met  
 1 5 10 15

Ser Glu Val Arg Pro Leu Ser Arg Asp Ile Leu Met Glu Thr Leu Leu  
 20 25 30

## 4403

Tyr Glu Gln Leu Leu Glu Pro Pro Thr Met Glu Val Leu Gly Met Thr  
                   35                                  40                                  45  
 Asp Ser Glu Glu Asp Leu Asp Pro Met Glu Asp Phe Asp Ser Leu Glu  
           50                                  55                                  60  
 Cys Met Glu Gly Ser Asp Ala Leu Ala Leu Arg Leu Ala Cys Ile Gly  
       65                                  70                                  75                                  80  
 Asp Glu Met Asp Val Ser Leu Arg Ala Pro Arg Leu Ala Gln Leu Ser  
                                   85                                  90                                  95  
 Glu Val Ala Met His Ser Leu Gly Leu Ala Phe Ile Tyr Asp Gln Thr  
                   100                                  105                                  110  
 Glu Asp Ile Arg Asp Val Leu Arg Ser Phe Met Asp Gly Phe Thr Thr  
           115                                  120                                  125  
 Leu Lys Glu Asn Ile Met Arg Phe Trp Arg Ser Pro Asn Pro Gly Ser  
       130                                  135                                  140  
 Trp Val Ser Cys Glu Gln Val Leu Leu Ala Leu Leu Leu Leu Leu Ala  
       145                                  150                                  155                                  160  
 Leu Leu Leu Pro Leu Leu Ser Gly Gly Leu His Leu Leu Leu Lys  
                                   165                                  170                                  175

&lt;210&gt; 4848

&lt;211&gt; 179

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4848

Ser Thr Leu Arg Ile Pro Gly Pro Cys Phe Pro Ser Glu Lys Thr His  
       1                                  5                                  10                                  15  
 Asn His Asp Pro Gln Pro Gly Asp Pro Asn Ser Arg Pro Ser Ser Pro  
           20                                  25                                  30  
 Lys Pro Ala Gln Pro Ala Leu Lys Met Gln Val Leu Tyr Glu Phe Glu  
           35                                  40                                  45  
 Ala Arg Asn Pro Arg Glu Leu Thr Val Val Gln Gly Glu Lys Leu Glu  
           50                                  55                                  60  
 Val Leu Asp His Ser Lys Arg Trp Trp Leu Val Lys Asn Glu Ala Gly  
       65                                  70                                  75                                  80



## 4404

Arg Ser Gly Tyr Ile Pro Ser Asn Ile Leu Glu Pro Leu Gln Pro Gly  
85 90 95

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Gly | Thr | Gln | Gly | Gln | Ser | Pro | Ser | Arg | Val | Pro | Met | Leu | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

Leu Ser Ser Arg Pro Glu Glu Val Thr Asp Trp Leu Gln Ala Glu Asn  
115 120 125

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Thr | Ala | Thr | Val | Arg | Thr | Leu | Gly | Ser | Leu | Thr | Gly | Ser | Gln |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

Leu Leu Arg Ile Arg Pro Gly Glu Leu Gln Met Leu Cys Pro Gln Glu  
145 150 155 160

Ala Pro Arg Ile Leu Ser Arg Leu Glu Ala Val Arg Arg Met Leu Gly  
165 170 175

Ile Ser Pro

<210> 4849

 $\langle 211 \rangle \quad 111$ 

<212> PRT

<213> Homo sapiens

<400> 4849

Leu Arg Arg Ser Gly Leu Ser Arg Asp Ala Thr Leu Thr Cys Leu Val  
1 5 10 15

Pro Ser Ala Ala Phe Gly Cys Ala Gly Lys Leu Arg Arg Gln Trp Pro  
20 25 30

Arg Asp Pro Ala Cys Leu Arg Arg Pro Arg Leu Asp Ala Lys Glu Leu  
35 40 45

Gln His Pro Gly Asp Lys Met Pro Thr Gly Lys Gln Leu Ala Asp Ile  
50 55 60

Gly Tyr Lys Thr Phe Ser Thr Ser Met Met Leu Leu Thr Val Tyr Gly  
65 70 75 80

Gly Tyr Leu Cys Ser Val Arg Val Tyr His Tyr Phe Gln Trp Arg Arg  
85 90 95

Ala Gln Arg Gln Ala Ala Glu Glu Gln Lys Thr Ser Gly Ile Met  
100 105 110

## 4405

&lt;210&gt; 4850

&lt;211&gt; 114

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (63)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4850

Pro Met Gly Arg Arg Leu Trp Arg Leu Leu Leu Ser Pro Gln Leu Pro  
 1 5 10 15

Ala Gly Gly Thr Val Ser Pro Phe Pro Gln Gly Thr Trp Leu Ser Gly  
 20 25 30

Gly Asn Ala His Phe Pro Gly Leu Asp Cys Gln Leu Phe Leu Ala Gly  
 35 40 45

Glu Glu Pro Cys Leu Ser Ala Pro Glu Pro Thr Val Arg Gly Xaa Ser  
 50 55 60

Arg Leu Gln Pro Leu Ala Gln Ser Gln Gln Pro Ala Lys His Thr Glu  
 65 70 75 80

Gly Asp Cys His Leu Pro Leu Pro Ala Ala Glu Pro Gln Arg Ser Asp  
 85 90 95

Gly Ser Tyr Thr Gly Gln Gly Phe Leu Leu Gly Ile Thr Ser His Arg  
 100 105 110

Asn Gln

&lt;210&gt; 4851

&lt;211&gt; 319

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4851

Arg Ala Tyr Lys Pro Ser Arg Val Leu Arg Glu Leu Gln Leu Asp Lys  
 1 5 10 15

Asp Ser Val Trp His Gly Cys Gly Glu Val Leu Lys Ala Lys Tyr Lys  
 20 25 30

Gly Lys Ser Tyr Arg Ala Thr Val Glu Ile Val Lys Thr Ala Asp Arg

## 4406

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Val Thr Glu Phe Cys Arg Gln Thr Cys Ile Lys Leu Glu Cys Cys Pro |     |     |
| 50  | 55  | 60  |
| Asn Leu Phe Gly Pro Arg Met Val Leu Asp Lys Cys Ser Glu Asn Cys |     |     |
| 65  | 70  | 75  |
| Ser Val Leu Thr Lys Thr Lys Tyr Thr His Tyr Tyr Gly Lys Lys Lys |     |     |
| 85  | 90  | 95  |
| Asn Lys Arg Ile Gly Arg Pro Pro Gly Gly His Ser Asn Leu Ala Cys |     |     |
| 100   | 105 | 110 |
| Ala Leu Lys Lys Ala Ser Lys Arg Arg Lys Arg Arg Lys Asn Val Phe |     |     |
| 115   | 120 | 125 |
| Val His Lys Lys Lys Arg Ser Ser Ala Ser Val Asp Asn Thr Pro Ala |     |     |
| 130   | 135 | 140 |
| Gly Ser Pro Gln Gly Ser Gly Gly Glu Asp Glu Asp Asp Pro Asp Glu |     |     |
| 145   | 150 | 155 |
| Gly Asp Asp Asp Ser Leu Ser Glu Gly Ser Thr Ser Glu Gln Gln Asp |     |     |
| 165   | 170 | 175 |
| Glu Leu Gln Glu Glu Ser Glu Met Ser Glu Lys Lys Ser Cys Ser Ser |     |     |
| 180   | 185 | 190 |
| Ser Pro Thr Gln Ser Glu Ile Ser Thr Ser Leu Pro Pro Asp Arg Gln |     |     |
| 195   | 200 | 205 |
| Arg Arg Lys Arg Glu Leu Arg Thr Phe Ser Phe Ser Asp Asp Glu Asn |     |     |
| 210   | 215 | 220 |
| Lys Pro Pro Ser Pro Lys Glu Ile Arg Ile Glu Val Ala Glu Arg Leu |     |     |
| 225   | 230 | 235 |
| His Leu Asp Ser Asn Pro Leu Lys Trp Ser Val Ala Asp Val Val Arg |     |     |
| 245   | 250 | 255 |
| Phe Ile Arg Ser Thr Asp Cys Ala Pro Leu Ala Arg Ile Phe Leu Asp |     |     |
| 260   | 265 | 270 |
| Gln Glu Ile Asp Gly Gln Ala Leu Leu Leu Leu Thr Leu Pro Thr Val |     |     |
| 275   | 280 | 285 |
| Gln Glu Cys Met Asp Leu Lys Leu Gly Pro Ala Ile Lys Leu Cys His |     |     |
| 290   | 295 | 300 |
| His Ile Glu Arg Ile Lys Phe Ala Phe Tyr Glu Gln Phe Ala Asn     |     |     |

## 4407

305

310

315

&lt;210&gt; 4852

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4852

Leu Pro Pro His His Pro Pro His Leu Phe Ser Gly Arg Val Gly Ile

1

5

10

15

Ala Ala Gly Gly Asp Phe Gly Ser Leu Ala Thr Pro Ala Arg Thr Ala

20

25

30

Gly Gln Pro Leu Cys Gly Asp Ala Trp Cys Pro Ile Cys Arg Pro Ser

35

40

45

Glu Glu Cys Thr Ala Phe Thr Phe Tyr Cys Val Arg Val His Pro Asp

50

55

60

Cys Ser Ile Gln Lys Ser Phe Phe Phe Pro His Arg Gln Ser Gly Asn

65

70

75

80

Asp Ser Phe Pro Asp Cys Phe Cys Leu Val Pro Gly Asn Leu Glu Ser

85

90

95

Ile Pro Gln

&lt;210&gt; 4853

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4853

Asp Pro Ser Ile Leu Glu Thr Asn Ala Pro Leu Lys Ser Asn Ile Tyr

1

5

10

15

Thr Ala Val Asn Ile Cys Lys Val Ser Met Phe Asn Ser Leu Arg Ile

20

25

30

Leu Arg Ile Met Asp Leu Leu Ala Lys Ile Pro Leu Lys Gln Leu Ser

35

40

45

His Ile Ser Asn Phe Tyr Leu Gly Lys Gln Val

50

55

## 4408

&lt;210&gt; 4854

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4854

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Ala | Lys | Gly | Pro | Leu | Leu | Ala | Gly | His | Pro | Cys | Pro | Ile | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Gly | Pro | Phe | Pro | Cys | Gly | His | Arg | Glu | Val | Trp | Pro | Glu | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Thr | Pro | Ala | Pro | Leu | His | Pro | Glu | Leu | Gly | Ala | Thr | Ser | Glu | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Leu | Ser | Glu | His | Ala | Phe | Pro | Cys | Ser | Xaa | Arg | Gly | Met | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Ser | Asp | Ala | Gly | Ala | Glu | Arg | Pro | Gly | Arg | Lys | Gly | Val | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Val | Val | Cys | Lys | Ala | Leu | Val | Gly | Thr | Cys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |

&lt;210&gt; 4855

&lt;211&gt; 84

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4855

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Arg | Phe | Cys | Ser | Asn | Asn | Arg | Asp | Gln | Arg | Val | Asn | Gln | Ile | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Cys | Tyr | Asn | Cys | Met | Ile | Gln | Arg | Gln | Phe | Asn | His | Pro | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Pro | Trp | Pro | Pro | Gln | Ser | Arg | Pro | Ala | Ile | Arg | Phe | Leu | Leu | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Val | Asn | Leu | His | Phe | Glu | Ser | Cys | Gly | Ser | Phe | Gly | Asp | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

**4409**

Val Leu Phe Tyr Phe Ala Leu Leu Ile Lys Glu Leu Val Glu Lys Lys  
 65 70 75 80

Lys Lys Lys Thr

<210> 4856

<211> 105

<212> PRT

<213> Homo sapiens

<400> 4856

Val Asn Ser Arg Arg Gly Gly Lys Arg Ser Cys Arg Gly Gly Lys Asn  
 1 5 10 15

Lys Pro Val Pro Thr Thr Glu Thr Pro Asn His Leu Ser Pro Val Asp  
 20 25 30

Gly Pro Ala Lys Thr Ser Thr Gln Gln Asp Tyr Arg Gly Arg Asn Pro  
 35 40 45

Lys Cys Trp Cys Gly Arg Ser Lys Thr Trp Gly Glu Phe Leu Asp Leu  
 50 55 60

Glu Leu Arg Ala Met Gly Leu Asp Met Thr Gly Thr Asn Ser Cys His  
 65 70 75 80

Met Phe Met Val Arg Cys His Thr Phe Ser Ala Val Leu Phe His Gln  
 85 90 95

Tyr Leu Pro Gly Lys Gln Arg Met Cys  
 100 105

<210> 4857

<211> 165

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (77)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (144)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4410

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (145)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (157)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4857

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Phe | Thr | Ala | Ser | Ser | Ser | Ser | Gly | Met | Val | Pro | Lys | Leu | Pro | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Lys | Met | Asn | Asn | Arg | Asp | Leu | Lys | Pro | Gln | Pro | Asp | Ile | Val | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Leu | Pro | Thr | Ala | Tyr | Glu | Leu | Asp | Ser | Thr | Lys | Leu | Lys | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Ile | Thr | Ser | Pro | Met | Phe | Arg | Asn | Val | Pro | Thr | Ala | Asn | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Glu | Pro | Gly | Ile | Arg | Arg | Val | Pro | Gly | Ala | Ser | Xaa | Val | Ile | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Ser | Ser | Thr | Thr | Gly | Met | Val | Val | Gly | Ile | Val | Ala | Ala | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Cys | Ile | Leu | Ile | Leu | Leu | Tyr | Ala | Met | Tyr | Lys | Tyr | Arg | Asn |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asp | Glu | Gly | Ser | Tyr | Gln | Val | Asp | Glu | Thr | Arg | Asn | Tyr | Ile | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ser | Ala | Gln | Ser | Asn | Gly | Thr | Leu | Met | Lys | Gly | Glu | Ser | Ser | Xaa |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Arg | Arg | Ala | Gly | His | Lys | Lys | Pro | Glu | Lys | Thr | Xaa | Gly | Gln | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Lys | Tyr | Leu | Thr | Trp |
|     |     |     |     | 165 |

&lt;210&gt; 4858

&lt;211&gt; 48

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4411

<220>  
 <221> SITE  
 <222> (15)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (32)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (35)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (37)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (41)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4858  
 Ser Leu Ala Lys His Leu Asn His Leu Ser Ile Leu Ser Trp Xaa Ile  
           1                  5                  10                  15  
 Ile Ile Lys Ala Gln Asn Asn Leu Leu Leu Glu Asn Met Cys Phe Xaa  
                   20                  25                  30  
 Asn Glu Xaa Lys Xaa Ile Lys Lys Xaa Lys Lys Gly Ala Ala Gly Leu  
           35                  40                  45

<210> 4859  
 <211> 86  
 <212> PRT  
 <213> Homo sapiens

<400> 4859  
 Glu Gly Met Gly His Thr Ser Pro Arg Ala Asp Pro Ala Gly Gly Ser  
           1                  5                  10                  15  
 Pro Gly Ala Gly Ser Cys Arg Pro Gly Ala Gly Pro Cys His Pro Gly



## 4412

20 25 30  
 Arg Ala Arg Asp Met Ala Gly Pro Gly His Pro Gly Ala Gly Leu Gly  
 35 40 45  
 Arg Pro Gly Arg His Arg Glu Gly Arg Asp Gly Arg Pro Arg Pro Ser  
 50 55 60  
 Ala Val Pro Ala Thr Pro Met His Arg Ser Ser Ser Leu Pro His Pro  
 65 70 75 80  
 Lys Ala Val Ala Gly Ala  
 85

&lt;210&gt; 4860

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4860

His Arg Ala Xaa Ser Glu Ala Glu Met Gln Trp Arg Leu Gln Val Asn  
 1 5 10 15  
 Arg Leu Gln Glu Leu Ile Asp Gln Leu Glu Cys Lys Ala Pro Arg Leu  
 20 25 30  
 Glu Pro Leu Arg Glu Glu Asp Leu Ala Lys Gly Pro Asp Leu His Ile  
 35 40 45  
 Leu Met Ala Gln Arg Gln Val Gln Val Ala Glu Glu Gly Leu Gln Asp  
 50 55 60  
 Phe His Arg Ala Leu Arg Cys Tyr Val Asp Phe Thr Gly Ala Gln Ser  
 65 70 75 80  
 His Cys Leu His Val Ser Ala Gln Lys Met Leu Asp Gly Ala Ser Phe  
 85 90 95  
 Thr Leu Tyr Glu Phe Trp Gln Asp Glu Ala Ser Trp Arg Arg His Gln  
 100 105 110  
 Gln Ser Pro Gly Ser Lys Ala Phe Gln Arg Ile Leu Ile Asp His Cys  
 115 120 125

## 4413

Gly Pro Arg Thr Pro Ser Pro Leu Cys Ser Ser Gln Pro Pro Gly Gly  
 130 135 140

<210> 4861  
 <211> 595  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (392)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (393)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (571)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4861  
 Leu Ile Gln Asn Val Thr Gln Asn Asp Thr Gly Phe Tyr Thr Leu His  
 1 5 10 15

Val Ile Lys Ser Asp Leu Val Asn Glu Glu Ala Thr Gly Gln Phe Arg  
 20 25 30

Val Tyr Pro Glu Leu Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys  
 35 40 45

Pro Val Glu Asp Lys Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Thr  
 50 55 60

Gln Asp Ala Thr Tyr Leu Trp Trp Val Asn Asn Gln Ser Leu Pro Val  
 65 70 75 80

Ser Pro Arg Leu Gln Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe  
 85 90 95

Asn Val Thr Arg Asn Asp Thr Ala Ser Tyr Lys Cys Glu Thr Gln Asn  
 100 105 110

Pro Val Ser Ala Arg Arg Ser Asp Ser Val Ile Leu Asn Val Leu Tyr

## 4414

|   |     |     |
|---|-----|-----|
| 115   | 120 | 125 |
| Gly Pro Asp Ala Pro Thr Ile Ser Pro Leu Asn Thr Ser Tyr Arg Ser |     |     |
| 130   | 135 | 140 |
| Gly Glu Asn Leu Asn Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala |     |     |
| 145   | 150 | 155 |
| Gln Tyr Ser Trp Phe Val Asn Gly Thr Phe Gln Gln Ser Thr Gln Glu |     |     |
|   | 165 | 170 |
| Leu Phe Ile Pro Asn Ile Thr Val Asn Asn Ser Gly Ser Tyr Thr Cys |     |     |
|   | 180 | 185 |
| Gln Ala His Asn Ser Asp Thr Gly Leu Asn Arg Thr Thr Val Thr Thr |     |     |
|   | 195 | 200 |
| Ile Thr Val Tyr Ala Glu Pro Pro Lys Pro Phe Ile Thr Ser Asn Asn |     |     |
|   | 210 | 215 |
| Ser Asn Pro Val Glu Asp Glu Asp Ala Val Ala Leu Thr Cys Glu Pro |     |     |
|   | 225 | 230 |
| Glu Ile Gln Asn Thr Thr Tyr Leu Trp Trp Val Asn Asn Gln Ser Leu |     |     |
|   | 245 | 250 |
| Pro Val Ser Pro Arg Leu Gln Leu Ser Asn Asp Asn Arg Thr Leu Thr |     |     |
|   | 260 | 265 |
| Leu Leu Ser Val Thr Arg Asn Asp Val Gly Pro Tyr Glu Cys Gly Ile |     |     |
|   | 275 | 280 |
| Gln Asn Glu Leu Ser Val Asp His Ser Asp Pro Val Ile Leu Asn Val |     |     |
|   | 290 | 300 |
| Leu Tyr Gly Pro Asp Asp Pro Thr Ile Ser Pro Ser Tyr Thr Tyr Tyr |     |     |
|   | 305 | 310 |
| Arg Pro Gly Val Asn Leu Ser Leu Ser Cys His Ala Ala Ser Asn Pro |     |     |
|   | 325 | 330 |
| Pro Ala Gln Tyr Ser Trp Leu Ile Asp Gly Asn Ile Gln Gln His Thr |     |     |
|   | 340 | 345 |
| Gln Glu Leu Phe Ile Ser Asn Ile Thr Glu Lys Asn Ser Gly Leu Tyr |     |     |
|   | 355 | 360 |
| Thr Cys Gln Ala Asn Asn Ser Ala Ser Gly His Ser Arg Thr Thr Val |     |     |
|   | 370 | 375 |
| Lys Thr Ile Thr Val Ser Ala Xaa Xaa Pro Lys Pro Ser Ile Ser Ser |     |     |

## 4415

```

385              390              395              400
Asn Asn Ser Lys Pro Val Glu Asp Lys Asp Ala Val Ala Phe Thr Cys
      405              410              415
Glu Pro Glu Ala Gln Asn Thr Thr Tyr Leu Trp Trp Val Asn Gly Gln
      420              425              430
Ser Leu Pro Val Ser Pro Arg Leu Gln Leu Ser Asn Gly Asn Arg Thr
      435              440              445
Leu Thr Leu Phe Asn Val Thr Arg Asn Asp Ala Arg Ala Tyr Val Cys
      450              455              460
Gly Ile Gln Asn Ser Val Ser Ala Asn Arg Ser Asp Pro Val Thr Leu
465              470              475              480
Asp Val Leu Tyr Gly Pro Asp Thr Pro Ile Ile Ser Pro Pro Asp Ser
      485              490              495
Ser Tyr Leu Ser Gly Ala Asn Leu Asn Leu Ser Cys His Ser Ala Ser
      500              505              510
Asn Pro Ser Pro Gln Tyr Ser Trp Arg Ile Asn Gly Ile Pro Gln Gln
      515              520              525
His Thr Gln Val Leu Phe Ile Ala Lys Ile Thr Pro Asn Asn Asn Gly
      530              535              540
Thr Tyr Ala Cys Phe Val Ser Asn Leu Ala Thr Gly Arg Asn Asn Ser
545              550              555              560
Ile Val Lys Ser Ile Thr Val Ser Ala Ser Xaa Thr Ser Pro Gly Leu
      565              570              575
Ser Ala Gly Ala Thr Val Gly Ile Met Ile Gly Val Leu Val Gly Val
      580              585              590
Ala Leu Ile
      595

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&lt;210&gt; 4862

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

## 4416

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (94)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (95)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4862

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Val | Arg | Asn | Ser | Arg | Val | Asp | Pro | Arg | Val | Arg | Ala | Leu | Lys | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Phe | Lys | Glu | Tyr | Leu | Ile | Glu | Leu | Xaa | Xaa | Leu | Gln | His | Phe | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Asn | Met | Met | Asp | Phe | Leu | Ala | Phe | Lys | Glu | Arg | Leu | Tyr | Gly | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Ala | Tyr | Leu | Arg | Gln | Asn | Asp | Leu | Asp | Ile | Glu | Glu | Glu | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | His | Phe | Glu | Val | Ile | Asn | Asp | Glu | Val | Lys | Val | Val | Ala | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | His | Gly | Gln | Pro | Gly | Thr | Pro | Val | Ala | Ile | Ala | Thr | Xaa | Xaa | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Thr | Ser | Ala | Ala | Phe | Pro | Ala | Gln | Gln | Gln | Pro | Leu | Gln | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Asp | Gly | Ser | Thr | Val | Gln | Leu | Pro | Arg | Leu | Ser | Ser | Leu | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Phe | Glu | Asp | Ser | Met | Cys |
|     |     |     |     |     | 130 |

<210> 4863

<211> 209

<212> PRT

<213> Homo sapiens

## 4417

&lt;400&gt; 4863

```

Leu Val Pro Arg Pro Arg Pro Arg Gln Leu Cys Ala Val Ile His Ser
 1             5             10             15

Leu Leu Arg Pro Gly Ala Pro Phe Pro Ala Arg Arg Arg Ala Arg Gln
      20             25             30

Leu Gly Val Gln Arg Pro Arg Asn His Glu Gln Val Ser Arg Ser Ser
      35             40             45

Glu Ala Pro Gly Thr Pro Ala His Ala Met Ala Asp Ser Glu Arg Leu
      50             55             60

Ser Ala Pro Gly Cys Trp Ala Ala Cys Thr Asn Phe Ser Arg Thr Arg
      65             70             75             80

Lys Gly Ile Leu Leu Phe Ala Glu Ile Ile Leu Cys Leu Val Ile Leu
      85             90             95

Ile Cys Phe Ser Ala Ser Thr Pro Gly Tyr Ser Ser Leu Ser Val Ile
      100            105            110

Glu Met Ile Leu Ala Ala Ile Phe Phe Val Val Tyr Met Cys Asp Leu
      115            120            125

His Thr Lys Ile Pro Phe Ile Asn Trp Pro Trp Ser Asp Phe Phe Arg
      130            135            140

Thr Leu Ile Ala Ala Ile Leu Tyr Leu Ile Thr Ser Ile Val Val Leu
      145            150            155            160

Val Glu Arg Gly Asn His Ser Lys Ile Val Ala Gly Val Leu Gly Leu
      165            170            175

Ile Ala Thr Cys Leu Phe Gly Tyr Asp Ala Tyr Val Thr Phe Pro Val
      180            185            190

Arg Gln Pro Arg His Thr Ala Ala Pro Thr Asp Pro Ala Asp Gly Pro
      195            200            205

Val

```

&lt;210&gt; 4864

&lt;211&gt; 129

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4418

&lt;400&gt; 4864

Val Cys Val Arg Val Arg Gly Arg Asn Arg Ser Ala Arg Ser Leu Pro  
 1 5 10 15

Leu Glu Gln Cys Leu Pro Gln Tyr Phe Cys Arg Gly Lys Asp Arg Asn  
 20 25 30

Ser Leu Leu Gly Phe Leu Gln Ser Pro Cys Thr Cys Gln Ser Phe Ser  
 35 40 45

Tyr Gln Cys Lys Gly Asn Pro Glu Leu Arg Phe Glu Leu Ser His His  
 50 55 60

Leu His Gly Gln Ile Ser Pro Leu Pro Lys Gly Ser Phe Arg Leu Trp  
 65 70 75 80

Val Tyr Leu Phe Leu His Ala Ser Ser Trp Gln Cys Pro Val Glu Ala  
 85 90 95

Tyr Leu Pro Ile Cys Val Cys Ile His Ser Leu Lys Thr Thr Arg Gln  
 100 105 110

Lys Lys Lys Lys Lys Thr Arg Gly Gly Ala Arg Tyr Pro Ile Arg Ala  
 115 120 125

Ile

&lt;210&gt; 4865

&lt;211&gt; 316

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4865

Cys Met Asp Phe Gly Val Leu Val Pro Thr Ala Tyr Met Phe Trp Gly  
 1 5 10 15

Leu Leu Ser Cys Ser Leu Pro Thr Phe Cys Val Met Ser Val Pro Gly  
 20 25 30

Arg Trp Pro Pro Ala Arg Trp Arg Leu Ser Ile Leu Ala Val Ser Ile  
 35 40 45

Met Pro Cys Val Cys Leu Ala Ser Leu Leu Gln Ile Leu Trp Thr Arg  
 50 55 60

Ser Ser Ser Pro Ala His His Leu Ala Ser Pro Phe Leu Cys Val Gln  
 65 70 75 80

## 4419

```

Ile Trp Gln Cys Gly Gly Val Leu Glu Thr His Pro Cys Ser His Val
      85                      90                      95

Gly His Val Phe Pro Lys Gln Ala Pro Tyr Ser Arg Asn Lys Ala Leu
      100                    105                    110

Ala Asn Ser Val Arg Ala Ala Glu Val Trp Met Asp Glu Phe Lys Glu
      115                    120                    125

Leu Tyr Tyr His Arg Asn Pro Arg Ala Arg Leu Glu Pro Phe Gly Asp
      130                    135                    140

Val Thr Glu Arg Lys Gln Leu Arg Asp Lys Leu Gln Cys Lys Asp Phe
      145                    150                    155                    160

Lys Trp Phe Leu Glu Thr Val Tyr Pro Glu Leu His Val Pro Glu Asp
      165                    170                    175

Arg Pro Gly Phe Phe Gly Met Leu Gln Asn Lys Gly Leu Thr Asp Tyr
      180                    185                    190

Cys Phe Asp Tyr Asn Pro Pro Asp Glu Asn Gln Ile Val Gly His Gln
      195                    200                    205

Val Ile Leu Tyr Leu Cys His Gly Met Gly Gln Asn Gln Phe Phe Glu
      210                    215                    220

Tyr Thr Ser Gln Lys Glu Ile Arg Tyr Asn Thr His Gln Pro Glu Gly
      225                    230                    235                    240

Cys Ile Ala Val Glu Ala Gly Met Asp Thr Leu Ile Met His Leu Cys
      245                    250                    255

Glu Glu Thr Ala Pro Glu Asn Gln Lys Phe Ile Leu Gln Glu Asp Gly
      260                    265                    270

Ser Leu Phe His Glu Gln Ser Lys Lys Cys Val Gln Ala Ala Arg Lys
      275                    280                    285

Glu Ser Ser Asp Ser Phe Val Pro Leu Leu Arg Asp Cys Thr Asn Ser
      290                    295                    300

Asp His Gln Lys Trp Phe Phe Lys Glu Arg Met Leu
      305                    310                    315

```

&lt;210&gt; 4866

&lt;211&gt; 220

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



## 4420

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4866

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Arg | Arg | Arg | Gly | Thr | Met | Ala | Ala | Ala | Ala | Asp | Glu | Arg | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Asp | Gly | Glu | Asp | Glu | Glu | Glu | Glu | Glu | Gln | Leu | Val | Leu | Val |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Ser | Gly | Ile | Ile | Asp | Ser | Xaa | Phe | Leu | Ser | Lys | Cys | Glu | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Lys | Val | Leu | Gly | Ile | Asp | Thr | Glu | Arg | Pro | Ile | Leu | Gln | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ser | Cys | Val | Phe | Ala | Gly | Glu | Tyr | Glu | Asp | Thr | Leu | Gly | Thr | Cys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ile | Phe | Glu | Glu | Asn | Val | Glu | His | Ala | Asp | Thr | Glu | Gly | Asn | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Val | Leu | Lys | Tyr | Lys | Cys | His | Thr | Met | Lys | Lys | Leu | Ser | Met |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Thr | Leu | Leu | Thr | Glu | Lys | Lys | Glu | Gly | Glu | Glu | Asn | Ile | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Glu | Trp | Leu | Gln | Ile | Lys | Asp | Asn | Asp | Phe | Ser | Tyr | Arg | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Met | Ile | Cys | Asn | Phe | Leu | His | Glu | Asn | Glu | Asp | Glu | Glu | Val | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Ala | Pro | Asp | Lys | Ser | Leu | Glu | Leu | Glu | Glu | Glu | Glu | Ile | Gln |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Asp | Ser | Ser | Asn | Leu | Ser | Cys | Glu | Gln | Glu | Lys | Pro | Met | His |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Ile | Glu | Asp | Ser | Gly | Pro | Leu | Ile | Asp | Ile | Pro | Ser | Glu | Thr |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gly | Ser | Val | Phe | Met | Glu | Thr | Gln | Met | Leu | Pro |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |

## 4421

&lt;210&gt; 4867

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4867

Lys Thr Leu Phe Thr Tyr Ser Phe His Gly Tyr Asn Thr Leu Ala Asp  
1 5 10 15

Phe Leu Leu Ala Leu Gly Ala Met Ile Leu Ile Thr Phe Cys Lys Val  
20 25 30

Thr Asn Val Ile His Ser Thr Leu Cys Gly Ser His Leu Phe Arg Leu  
35 40 45

Met Cys Phe Gly Glu Arg Lys Lys Phe Leu Ala Glu Tyr Tyr Phe Glu  
50 55 60

Leu Ser Arg Thr Leu Ser His Gln Arg Gln Phe Phe Ser Val Gln Phe  
65 70 75 80

Pro Ile Pro Asp Asn Leu Leu Lys  
85

&lt;210&gt; 4868

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4868

Ser Leu Ile Cys Tyr Val Gln Ser Leu Lys Ala Thr Thr His Phe Phe  
1 5 10 15

Leu Lys Val Asp Ala Phe Ser Ala Val Leu Glu Ser Val Phe Cys Phe  
20 25 30

Trp Gln Glu Ser Cys Lys Leu Cys Ile Leu Lys Gln Met Gln Lys Val  
35 40 45

Val Leu Cys Lys Thr Phe Val Phe Cys Leu Ser Gln Ile Asn Ile Leu  
50 55 60

&lt;210&gt; 4869

&lt;211&gt; 66

## 4422

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (28)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4869

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | Arg | Leu | Cys | Ile | Cys | Val | Asn | Ile | Tyr | Thr | Pro | Arg | Cys | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Lys | Cys | Leu | Glu | Ile | Thr | Val | His | Thr | Cys | Xaa | Leu | Pro | Ser | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Leu | Leu | Ser | Cys | Asn | Met | Ala | Leu | Lys | Asn | Tyr | Pro | Ile | Ser |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Val | Leu | Cys | Leu | Gly | Asn | Met | Val | Asn | Trp | Arg | Ile | Leu | Thr | His |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |
|-----|-----|
| Ser | Val |
| 65  |     |

&lt;210&gt; 4870

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4870

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | His | Leu | Leu | Ile | His | Gly | Leu | Tyr | Arg | Asn | Glu | Ala | Gly | Cys | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Asn | Leu | Glu | Ser | Pro | Ser | Trp | Arg | Thr | Ile | Lys | Leu | Phe | Lys | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Pro | Trp | Pro | Gly | Thr | Val | Val | His | Thr | Cys | Asn | Pro | Ser | Thr | Leu |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Leu | Gly | Arg | Gln | Thr | Glu | Leu | Arg | Ser | Leu | Arg | Pro | Ala | Trp |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Thr | Trp | Gln | Lys | Pro | Thr | Ser | Thr | Lys | Ser | Thr | Lys | Ile | Ser | Arg |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

4423

Ala

&lt;210&gt; 4871

&lt;211&gt; 141

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (39)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4871

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Gln | Arg | His | Ser | Pro | Trp | Pro | Leu | Ile | Ala | Leu | Leu | Val | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Gly | Xaa | Pro | Arg | Ser | Val | Val | Pro | Ala | Trp | Xaa | Thr | Glu | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Xaa | Ala | Thr | Leu | Glu | Xaa | Arg | Phe | Thr | Pro | His | Ala | Glu | Met | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Gln | Leu | Ser | Ser | Gln | Asp | Val | Gly | Gln | Ala | Ser | Phe | Lys | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gln | Ser | Ala | Glu | Glu | Ala | Lys | Arg | Ala | Ile | Glu | Ala | Val | Leu | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Pro | Arg | Ser | Val | Tyr | Arg | Arg | Lys | Leu | Cys | Gln | Asp | Arg | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Tyr | Phe | Thr | Val | Asp | Ile | Ala | His | Val | Thr | Cys | Trp | Phe | Gly | Asp |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4424

100 105 110  
 Gly Phe Ala Glu Val Leu Arg Ile Lys Pro Ala Ser Glu Pro Val His  
 115 120 125  
 Met Thr Gly Pro Val Gly Ser Leu Val Ser Leu Gly Ser  
 130 135 140  
  
 <210> 4872  
 <211> 241  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (8)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 4872  
 Val Ser Val Gly Gly Leu Ile Xaa Asn Leu Ile Gly Ile Cys Ala Phe  
 1 5 10 15  
 Ser His Ala His Ser His Ala His Gly Ala Ser Gln Gly Ser Cys His  
 20 25 30  
 Ser Ser Asp His Ser His Ser His His Met His Gly His Ser Asp His  
 35 40 45  
 Gly His Gly His Ser His Gly Ser Ala Gly Gly Gly Met Asn Ala Asn  
 50 55 60  
 Met Arg Gly Val Phe Leu His Val Leu Ala Asp Thr Leu Gly Ser Ile  
 65 70 75 80  
 Gly Val Ile Val Ser Thr Val Leu Ile Glu Gln Phe Gly Trp Phe Ile  
 85 90 95  
 Ala Asp Pro Leu Cys Ser Leu Phe Ile Ala Ile Leu Ile Phe Leu Ser  
 100 105 110  
 Val Val Pro Leu Ile Lys Asp Ala Cys Gln Val Leu Leu Leu Arg Leu  
 115 120 125  
 Pro Pro Glu Tyr Glu Lys Glu Leu His Ile Ala Leu Glu Lys Ile Gln  
 130 135 140  
 Lys Ile Glu Gly Leu Ile Ser Tyr Arg Asp Pro His Phe Trp Arg His  
 145 150 155 160



## 4426

Gly Ala Gln Asn Thr Val Ile Cys Ser Lys Leu Ala Ala Lys Cys Leu  
 115 120 125  
 Val Met Lys Ala Glu Met Asn Gly Ser Lys Leu Gly Arg Arg Ala Lys  
 130 135 140  
 Pro Glu Gly Ala Leu Gln Asn Asn Asp Gly Leu Tyr Asp Pro Asp Cys  
 145 150 155 160  
 Asp Glu Ser Gly Leu Phe Lys Ala Lys Gln Cys Asn Gly Thr Ser Xaa  
 165 170 175  
 Cys Trp Cys Val Asn Thr Ala Gly Val Arg Arg Thr Asp Lys Asp Thr  
 180 185 190  
 Glu Ile Thr Cys Ser Glu Arg Val Arg Thr Tyr Trp Ile Ile Ile Glu  
 195 200 205  
 Leu Lys His Lys Ala Arg Glu Lys Pro Tyr Asp Ser Lys Ser Leu Arg  
 210 215 220  
 Thr Ala Leu Gln Lys Glu Ile Thr Thr Arg Tyr Gln Leu Asp Pro Lys  
 225 230 235 240  
 Phe Ile Thr Ser Ile Leu Tyr Glu Asn Asn Val Ile Thr Ile Asp Leu  
 245 250 255  
 Val Gln Asn Ser Ser Gln Lys Thr Gln Asn Asp Val Asp Ile Ala Asp  
 260 265 270  
 Val Ala Tyr Tyr Phe Glu Lys Asp Val Lys Gly Glu Ser Leu Phe His  
 275 280 285  
 Ser Lys Lys Met Asp Leu Thr Val Asn Gly Glu Gln Leu Asp Leu Asp  
 290 295 300  
 Pro Gly Gln Thr Leu Ile Tyr Tyr Val Asp Glu Lys Ala Pro Glu Phe  
 305 310 315 320  
 Ser Met Gln Gly Leu Lys Ala Gly Val Ile Ala Val Ile Val Val Val  
 325 330 335  
 Val Ile Ala Val Val Ala Gly Ile Val Val Leu Val Ile Ser Arg Lys  
 340 345 350  
 Lys Arg Met Ala Lys Tyr Glu Lys Ala Glu Ile Lys Glu Met Gly Glu  
 355 360 365  
 Met His Arg Glu Leu Asn Ala  
 370 375

4427

&lt;210&gt; 4874

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4874

```

Ile Asn Gln Gln Leu Ala Leu Tyr Ile Trp Lys Ser Cys Arg His Ser
 1              5              10              15

Met Pro Ala Tyr Glu Ser Ser Leu Glu Trp Gly Cys Thr Leu Gln Arg
          20              25              30

His Arg Gly Arg Ala Ala Lys Thr Met Arg Val Tyr Phe Phe His Gln
          35              40              45

Cys Asp Leu Asn Val Arg His Arg Val Lys Gly Asp Tyr Phe Gly Ala
          50              55              60

Val Lys Phe Asn Glu Tyr Pro Ala Gly Phe Trp Thr Cys His Trp Leu
 65              70              75              80

Leu Ala Pro Leu Phe Cys Pro Ile Leu Leu Tyr Gly Met Gly Ala Ser
          85              90              95

Ser Ser Asn Ala Cys Thr Leu Ile Val Ser
          100              105

```

&lt;210&gt; 4875

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4875

```

Gln Ser Ala Met Ser Ser Arg Pro Leu Glu Ser Pro Pro Pro Tyr Arg
 1              5              10              15

Pro Asp Glu Phe Lys Pro Asn His Tyr Ala Pro Ser Asn Asp Ile Tyr
          20              25              30

Gly Gly Glu Met His Val Arg Pro Met Leu Ser Gln Pro Ala Tyr Ser
          35              40              45

Phe Tyr Pro Glu Asp Glu Ile Leu His Phe Tyr Lys Trp Thr Ser Pro
          50              55              60

Pro Gly Val Ile Arg Ile Leu Ser Met Leu Ile Ile Val Met Cys Ile

```



## 4428

65                                      70                                      75                                      80

Ala Ile Phe Ala Cys Val Ala Ser Arg Leu Pro  
                                    85                                      90

<210> 4876

<211> 88

<212> PRT

<213> Homo sapiens

<400> 4876

Tyr Arg Lys Leu Phe Phe Pro Gln Leu Phe Glu Gln His Ser Ser Phe  
1                                      5                                      10                                      15

Glu Asn Ser Cys Arg Ser Gln Phe Phe Val Thr Val Val Gln Ile Leu  
                                    20                                      25                                      30

Cys Phe Leu Ser Leu Met Lys Ser Ser Ile Glu Ala Ile Phe His Thr  
                                    35                                      40                                      45

Met Cys Tyr Ile Cys Val Arg Arg Cys Val Asn Ile Lys Ser His Thr  
                                    50                                      55                                      60

His Ile Tyr Thr His Val Lys Ile Tyr Ile Tyr Ile Tyr Ala Cys Glu  
65                                      70                                      75                                      80

Val Glu Ser Leu Pro Phe Pro Ile  
                                    85

<210> 4877

<211> 88

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (28)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (79)

## 4429

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4877

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Trp | Tyr | Tyr | Tyr | Phe | His | Tyr | Arg | Ala | Phe | Gly | Pro | Leu | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Leu | Arg | Trp | Ala | Asp | Pro | Ser | Xaa | Phe | Cys | Xaa | Arg | Val | Ile | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Arg | Val | Phe | Ser | Ser | Thr | Val | Lys | Val | Arg | Gln | Ser | Gly | Ser | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Thr | Gly | Asp | Trp | Asp | Ile | Trp | Asn | Lys | Leu | Arg | Trp | Asp | Thr | His | Ser |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Glu | Glu | Arg | Leu | His | Gly | Ile | Leu | Trp | Gly | Thr | Asn | Tyr | Cys | Xaa | Ile |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Thr | Ser | Asp | Val | Asn | Met | Ala | His |     |     |     |     |     |     |     |     |
|     |     |     |     | 85  |     |     |     |     |     |     |     |     |     |     |     |

<210> 4878

<211> 86

<212> PRT

<213> Homo sapiens

<400> 4878

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Thr | Lys | Leu | Asp | Gly | His | Gln | Thr | Gln | Gly | Phe | Val | Lys | Ile | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Pro | Ile | Pro | Leu | Thr | Gly | Ser | Val | Arg | Cys | Val | Lys | Leu | Leu | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Val | His | His | Ala | Ser | Met | Ser | Pro | Gln | Asp | Trp | Asp | Leu | Ser | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Gly | Ser | Leu | Ser | Leu | Gly | Ala | Asp | Met | Glu | Pro | Ser | Leu | Arg | Asp |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Val | Asp | Ala | Glu | Ala | His | Pro | Val | Arg | Ala | Pro | Leu | Leu | Ala | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Phe | Thr | Leu | Lys | Leu | Ile |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 85  |     |     |     |     |     |     |     |     |     |     |     |

<210> 4879

<211> 106

## 4430

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4879

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Cys | Ser | Trp | Phe | Ser | Leu | Gln | Ala | Leu | Ala | Lys | Pro | Cys | Pro | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Gln | Thr | Leu | Arg | Ala | His | Asp | Gln | Lys | Glu | Lys | Glu | Ser | Gln |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Glu | Glu | Gln | Gly | Pro | Gln | Leu | His | Ser | Pro | Pro | Leu | Xaa | Pro |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gly | Pro | Pro | Trp | Ala | Ala | Trp | Asn | Pro | Leu | Lys | Leu | Pro | Pro | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | His | Ser | Ser | Gly | Ala | Val | Pro | Gly | Ser | Ala | Cys | Ser | Pro | Trp | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Val | Pro | Ala | Ala | Pro | Pro | Ser | Val | Cys | Tyr | Leu | Ile | Tyr | Trp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | His | Ser | Gln | Ala | Leu | Ala | His | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |

&lt;210&gt; 4880

&lt;211&gt; 74

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4880

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Val | Ala | Cys | Asn | Thr | Val | Leu | Pro | Ala | Lys | Phe | Ser | Thr | Phe | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Phe | Tyr | Phe | Phe | Gly | Cys | Lys | Ala | Phe | Leu | Leu | Ser | Ile | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Tyr | Met | Phe | Cys | Pro | Ser | Cys | Ile | Val | Met | Phe | Gln | Ser | Ile |
|     | 35  |     |     |     |     |     |     | 40  |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Gln | Leu | Trp | Leu | Leu | Lys | Ser | Tyr | Ser | Cys | Glu | Asp | Leu | Pro | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Leu | Asp | Cys | Phe | Ser | Val | Leu | Tyr |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4431

65

70

&lt;210&gt; 4881

&lt;211&gt; 201

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4881

Cys Asn Leu Ala Lys Gly Val Ile Ser Ile Ser Phe Leu Lys Glu Glu

1

5

10

15

Glu Gln Glu Asp Glu Glu Glu Ile Asp Val Val Ser Val Glu Lys Arg

20

25

30

Gln Ala Pro Gly Lys Arg Ser Glu Ser Gly Ser Pro Ser Ala Gly Gly

35

40

45

His Ser Lys Pro Pro His Ser Pro Leu Val Leu Lys Arg Cys His Val

50

55

60

Ser Thr His Gln His Asn Tyr Ala Ala Pro Pro Ser Thr Arg Lys Asp

65

70

75

80

Tyr Pro Ala Ala Lys Arg Val Lys Leu Asp Ser Val Arg Val Leu Arg

85

90

95

Gln Ile Ser Asn Asn Arg Lys Cys Thr Ser Pro Arg Ser Ser Asp Thr

100

105

110

Glu Glu Asn Val Lys Arg Arg Thr His Asn Val Leu Glu Arg Gln Arg

115

120

125

Arg Asn Glu Leu Lys Arg Ser Phe Phe Ala Leu Arg Asp Gln Ile Pro

130

135

140

Glu Leu Glu Asn Asn Glu Lys Ala Pro Lys Val Val Ile Leu Lys Lys

145

150

155

160

Ala Thr Ala Tyr Ile Leu Ser Val Gln Ala Glu Glu Gln Lys Leu Ile

165

170

175

Ser Glu Glu Asp Leu Leu Arg Lys Arg Arg Glu Gln Leu Lys His Lys

180

185

190

Leu Glu Gln Leu Arg Asn Ser Cys Ala

195

200

## 4432

&lt;210&gt; 4882

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4882

Lys Gly Ile Val Arg Met Ser Leu Ser Ser Gly Ser Thr Thr Ala Val  
 1 5 10 15

Ser Tyr Leu Gly Pro Val Leu Ser Gln Gly Gly Trp Leu Val Lys Val  
 20 25 30

Met Cys Asp Leu Arg Arg Leu Ser Cys His Leu Pro His Val Asn Arg  
 35 40 45

Lys Gly Gly Ile Leu Pro Pro Pro Glu Tyr Thr Gly  
 50 55 60

&lt;210&gt; 4883

&lt;211&gt; 737

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (555)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (602)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4883

Pro Pro Arg Gly Leu Asp Pro Gly Ser Cys Cys Cys Cys Arg Cys Cys  
 1 5 10 15

Cys Pro Leu Arg Pro Gln Pro Pro Thr Gly Pro Gly Ala Ala Asp Pro  
 20 25 30

Val Asn Pro Glu Lys Leu Leu Val Ile Thr Val Ala Thr Ala Glu Thr  
 35 40 45

Glu Gly Tyr Leu Arg Phe Leu Arg Ser Ala Glu Phe Phe Asn Tyr Thr  
 50 55 60

Val Arg Thr Leu Gly Leu Gly Glu Glu Trp Arg Gly Gly Asp Val Ala  
 65 70 75 80

## 4433

Arg Thr Val Gly Gly Gly Gln Lys Val Arg Trp Leu Lys Lys Glu Met  
                                   85                                  90                                  95

Glu Lys Tyr Ala Asp Arg Glu Asp Met Ile Ile Met Phe Val Asp Ser  
                                   100                                  105                                  110

Tyr Asp Val Ile Leu Ala Gly Ser Pro Thr Glu Leu Leu Lys Lys Phe  
                                   115                                  120                                  125

Val Gln Ser Gly Ser Arg Leu Leu Phe Ser Ala Glu Ser Phe Cys Trp  
                                   130                                  135                                  140

Pro Glu Trp Gly Leu Ala Glu Gln Tyr Pro Glu Val Gly Thr Gly Lys  
 145                                  150                                  155                                  160

Arg Phe Leu Asn Ser Gly Gly Phe Ile Gly Phe Ala Thr Thr Ile His  
                                   165                                  170                                  175

Gln Ile Val Arg Gln Trp Lys Tyr Lys Asp Asp Asp Asp Asp Gln Leu  
                                   180                                  185                                  190

Phe Tyr Thr Arg Leu Tyr Leu Asp Pro Gly Leu Arg Glu Lys Leu Ser  
                                   195                                  200                                  205

Leu Asn Leu Asp His Lys Ser Arg Ile Phe Gln Asn Leu Asn Gly Ala  
                                   210                                  215                                  220

Leu Asp Glu Val Val Leu Lys Phe Asp Arg Asn Arg Val Arg Ile Arg  
 225                                  230                                  235                                  240

Asn Val Ala Tyr Asp Thr Leu Pro Ile Val Val His Gly Asn Gly Pro  
                                   245                                  250                                  255

Thr Lys Leu Gln Leu Asn Tyr Leu Gly Asn Tyr Val Pro Asn Gly Trp  
                                   260                                  265                                  270

Thr Pro Glu Gly Gly Cys Gly Phe Cys Asn Gln Asp Arg Arg Thr Leu  
                                   275                                  280                                  285

Pro Gly Gly Gln Pro Pro Pro Arg Val Phe Leu Ala Val Phe Val Glu  
                                   290                                  295                                  300

Gln Pro Thr Pro Phe Leu Pro Arg Phe Leu Gln Arg Leu Leu Leu Leu  
 305                                  310                                  315                                  320

Asp Tyr Pro Pro Asp Arg Val Thr Leu Phe Leu His Asn Asn Glu Val  
                                   325                                  330                                  335

Phe His Glu Pro His Ile Ala Asp Ser Trp Pro Gln Leu Gln Asp His  
                                   340                                  345                                  350

## 4434

Phe Ser Ala Val Lys Leu Val Gly Pro Glu Glu Ala Leu Ser Pro Gly  
 355 360 365  
 Glu Ala Arg Asp Met Ala Met Asp Leu Cys Arg Gln Asp Pro Glu Cys  
 370 375 380  
 Glu Phe Tyr Phe Ser Leu Asp Ala Asp Ala Val Leu Thr Asn Leu Gln  
 385 390 395 400  
 Thr Leu Arg Ile Leu Ile Glu Glu Asn Arg Lys Val Ile Ala Pro Met  
 405 410 415  
 Leu Ser Arg His Gly Lys Leu Trp Ser Asn Phe Trp Gly Ala Leu Ser  
 420 425 430  
 Pro Asp Glu Tyr Tyr Ala Arg Ser Glu Asp Tyr Val Glu Leu Val Gln  
 435 440 445  
 Arg Lys Arg Val Gly Val Trp Asn Val Pro Tyr Ile Ser Gln Ala Tyr  
 450 455 460  
 Val Ile Arg Gly Asp Thr Leu Arg Met Glu Leu Pro Gln Arg Asp Val  
 465 470 475 480  
 Phe Ser Gly Ser Asp Thr Asp Pro Asp Met Ala Phe Cys Lys Ser Phe  
 485 490 495  
 Arg Asp Lys Gly Ile Phe Leu His Leu Ser Asn Gln His Glu Phe Gly  
 500 505 510  
 Arg Leu Leu Ala Thr Ser Arg Tyr Asp Thr Glu His Leu His Pro Asp  
 515 520 525  
 Leu Trp Gln Ile Phe Asp Asn Pro Val Asp Trp Lys Glu Gln Tyr Ile  
 530 535 540  
 His Glu Asn Tyr Ser Arg Ala Leu Glu Gly Xaa Gly Ile Val Glu Gln  
 545 550 555 560  
 Pro Cys Pro Asp Val Tyr Trp Phe Pro Leu Leu Ser Glu Gln Met Cys  
 565 570 575  
 Asp Glu Leu Val Ala Glu Met Glu His Tyr Gly Gln Trp Ser Gly Gly  
 580 585 590  
 Arg His Glu Asp Ser Arg Leu Ala Gly Xaa Tyr Glu Asn Val Pro Thr  
 595 600 605  
 Val Asp Ile His Met Lys Gln Val Gly Tyr Glu Asp Gln Trp Leu Gln  
 610 615 620

## 4435

Leu Leu Arg Thr Tyr Val Gly Pro Met Thr Glu Ser Leu Phe Pro Gly  
625 630 635 640

Tyr His Thr Lys Ala Arg Ala Val Met Asn Phe Val Val Arg Tyr Arg  
645 650 655

Pro Asp Glu Gln Pro Ser Leu Arg Pro His His Asp Ser Ser Thr Phe  
660 665 670

Thr Leu Asn Val Ala Leu Asn His Lys Gly Leu Asp Tyr Glu Gly Gly  
675 680 685

Gly Cys Arg Phe Leu Arg Tyr Asp Cys Val Ile Ser Ser Pro Arg Lys  
690 695 700

Gly Trp Ala Leu Leu His Pro Gly Arg Leu Thr His Tyr His Glu Gly  
705 710 715 720

Leu Pro Thr Thr Trp Gly Thr Arg Tyr Ile Met Val Ser Phe Val Asp  
725 730 735

Pro

<210> 4884

<211> 73

<212> PRT

<213> Homo sapiens

<400> 4884

Glu Thr Thr Lys Glu Tyr His Glu Gly Ile Tyr Ala Pro Val Leu Ala  
1 5 10 15

Ile Ile Cys Leu Arg Arg Asn Leu Leu Asn Lys Ser Phe Tyr Pro Leu  
20 25 30

Thr Phe Thr Phe Ile Arg Pro Tyr Lys Arg Ser Asn Gly Asp Leu Lys  
35 40 45

Phe Phe Ser His Lys Ser Tyr Leu Phe Ser Ile Ser Ala Lys Ser Arg  
50 55 60

Ile Leu Ser Ser Lys Pro Lys Leu Thr  
65 70

<210> 4885

<211> 76



## 4436

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4885

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Lys | Pro | Ile | Tyr | Ile | Asn | Val | Xaa | Arg | Asp | Pro | Ile | Glu | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Ser | Tyr | Tyr | Tyr | Phe | Leu | Arg | Xaa | Gly | Asp | Asp | Tyr | Arg | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Arg | Arg | Arg | Lys | Gln | Gly | Asp | Lys | Lys | Thr | Phe | Asp | Glu | Cys |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | Glu | Gly | Gly | Ser | Asp | Cys | Ala | Pro | Glu | Lys | Leu | Trp | Leu | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Phe | Phe | Cys | Gly | His | Ser | Ser | Glu | Cys | Trp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |

&lt;210&gt; 4886

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4886

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Ala | Gly | Thr | Gly | Pro | Glu | Phe | Pro | Gly | Arg | Pro | Thr | Arg | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Glu | Gly | Gly | Lys | Pro | Gln | Met | Asn | Ser | Glu | Gly | Glu | Ile | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Pro | Ser | Gly | Ser | Gln | Ser | Ala | Lys | Pro | Val | Ser | Gln | Pro | Arg |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ser | Thr | Gln | Pro | Asp | Val | Cys | Ala | Ser | Pro | Gln | Glu | Lys | Pro | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Leu | Phe | His | Gln | Pro | Glu | Glu | Glu | Ile | Glu | Asp | Gly | Gly | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

4437

Phe Ile Pro Met Glu Asp Lys Thr Met Lys Lys Val Arg Lys  
                                     85                                    90

&lt;210&gt; 4887

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4887

Ile Leu Asn Glu Lys Lys Xaa Leu Xaa Lys Lys Gly Gly Arg Ser Arg  
   1                                    5                                    10                                    15

Gly Ser Lys Leu Thr Tyr Ala Cys Xaa Arg Arg His Ser Ser Ser Ile  
                                     20                                    25                                    30

Val Ser Pro  
                                     35

&lt;210&gt; 4888

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (63)

## 4438

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4888

Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly Gly Arg Ser Arg Thr  
1 5 10 15

Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr Ser Gly Thr Arg Tyr  
20 25 30

Pro Gln Gly His Ser Asp Thr Thr Val Ala Ile Ser Thr Ser Thr Val  
35 40 45

Leu Leu Cys Xaa Leu Ser Ala Val Ser Leu Leu Ala Cys Tyr Xaa Lys  
50 55 60

Ser Arg Gln Thr Pro Pro Leu Ala Ser Val Glu Met Glu Ala Met Glu  
65 70 75 80

Ala Leu Pro Val Thr Trp Gly Thr Ser Ser Arg Asp Glu Asp Leu Glu  
85 90 95

Asn Cys Ser His His Leu  
100

<210> 4889

<211> 69

<212> PRT

<213> Homo sapiens

<400> 4889

Leu Ser Gln Ser Gln Leu Asn Arg His Leu Asn Cys Ile Cys Lys Ile  
1 5 10 15

Leu Ser Leu Leu Pro Tyr Ser Leu Thr Lys Cys Asn Arg Arg Cys Pro  
20 25 30

His Lys Gly Met Asp Ile Gly Leu Gly Lys Asp Phe Arg Asn His Leu  
35 40 45

Arg Ile Leu Pro Thr Thr Asn Ser Ile Leu Gln Val Ser Ile Ser Ser  
50 55 60

Ile Leu Val Ile His  
65

<210> 4890

<211> 75

## 4439

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4890

Phe Val Ser Glu Gly Asp Phe Pro Ser Tyr Thr Leu Gly Leu Glu Asp  
1 5 10 15

Phe Glu Tyr Leu Gly Pro Phe Ser Cys Glu His Gly Leu Phe Pro His  
20 25 30

Ser Ser Tyr Leu Leu Thr Arg Gly Ile Leu Gly Arg Asp Leu Arg Ser  
35 40 45

Ser Phe Ser Cys Phe Pro Glu Gln Ser Leu Lys Phe Thr Val Asn Lys  
50 55 60

Leu Phe Asp His Glu Lys Lys Lys Lys Ser Thr  
65 70 75

&lt;210&gt; 4891

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (22)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (75)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4891

Gly Ala Ala Leu Leu Ile Trp Gly Val Ser Arg Leu Ser Ala Leu Thr  
1 5 10 15

Leu Leu Xaa His Pro Xaa Thr Asp Lys Val Arg Leu Gln Arg Arg Val

## 4440

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Pro | Met | Cys | Tyr | Ser | Phe | Phe | Xaa | Thr | Ser | Phe | Thr | Gly | Asp | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | His | Thr | Val | Gln | Phe | Thr | His | Leu | Lys | Cys | Thr | Ile | Gln | Trp | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Val | Tyr | Ser | Trp | Gly | Leu | Cys | Asn | Pro | Xaa | Pro |     |     |     |     |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     |     |

<210> 4892

<211> 106

&lt;212&gt; PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4892

Glu Glu Gly Leu Arg Asn Lys Lys Ala Lys Glu Pro Phe Glu Glu Ala  
1 5 10 15

Ser Cys Leu Leu Gly Ala Gly Val Cys Ala Gly Val Val Leu Arg Gly  
20 25 30

Arg Lys Glu Pro Xaa Ser Pro Glu Asp Pro Pro Gly Gly Ala Gly Leu  
35 40 45

Lys Phe Arg Trp Val Pro Gly Gly Ser Ala Leu Arg Ser Thr Asp Gly  
50 55 60

Leu Arg Ser Gln Cys Ala Ala Arg Thr Ser Arg Ser Gly Gly Arg Val  
65 70 75 80

Leu Pro Thr Pro Ala Leu Gly Ser Glu Lys Ala Ala Leu Val Leu Phe  
85 90 95

Leu Gly Met Ser Ala Glu Gly Ala Pro Gly  
100 105

<210> 4893

<211> 190

<212> PRT

<213> Homo sapiens

## 4441

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (33)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4893

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | His | Arg | Gln | Gln | Gln | Lys | Ala | His | Cys | Pro | His | Pro | Leu | Thr | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Phe | Leu | Ser | Leu | Phe | Lys | Ile | Leu | Ala | Ser | Asp | Cys | Ser | Ala | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asn | Phe | Leu | Val | Pro | Ser | Trp | Gly | Xaa | Trp | Gly | Gly | Val | Tyr | Arg |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Ser | Ala | Ser | Ala | Leu | Leu | Ser | Gln | Gly | Phe | Glu | Pro | Leu | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Gly | Gln | Thr | Arg | Lys | Asn | Glu | Asn | Thr | Ala | Trp | Gly | Ala | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Arg | Arg | Leu | Cys | Gln | Leu | Thr | Ser | Gly | His | Gly | Ala | Ala | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | His | Gly | Gly | Gln | Gly | Gln | Leu | His | Ile | Leu | Pro | Ser | Pro | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Phe | Thr | Val | Ala | Pro | Asn | Pro | Ala | Arg | Arg | Glu | Arg | Val | Ser | Ala |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Thr | Thr | Gly | Ser | Leu | Leu | Thr | Lys | Asn | Gly | Glu | Thr | Arg | Phe |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Leu | Ser | Ala | Glu | Glu | Pro | Gln | Ala | Gly | Leu | Ser | Glu | Arg | Asp | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Gly | Arg | Leu | Trp | Ile | Ala | Ser | Gln | Ile | Lys | Leu | Cys | Ser | Leu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Asn | Val | Ala | Ser | Arg | Gln | Glu | Lys | Ala | Trp | Gly | Leu | Asn | Ser |  |  |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |  |  |

&lt;210&gt; 4894

## 4442

<211> 64  
 <212> PRT  
 <213> Homo sapiens

<400> 4894  
 Gly Asp Lys Asn Val Leu Lys Phe Ile Val Met Met Leu Ala Ile Ser  
           1                  5                  10                  15  
 Ile Ser Arg Leu Asn Ala Val Met Val Ala Asn Ser Ile Asn Ile Phe  
                   20                  25                  30  
 Asn Val Val Met Val Ala Asn Ser Met Lys Asn Pro Asn Cys Thr Ile  
                   35                  40                  45  
 Ser Met Ser Glu Ser Met Leu Cys Glu Cys Leu His Lys Gly Phe Ile  
           50                  55                  60

<210> 4895  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 4895  
 Thr Val Pro Arg Pro Arg Pro Asp Phe Ser His Ala Pro Pro Ser Thr  
           1                  5                  10                  15  
 Ser Ala Leu Gly Cys Leu Gly Arg Glu Arg Arg Arg Gly Ala Trp Arg  
                   20                  25                  30  
 Gly Thr Pro Gly Gln Asn Asp Ser Gly Met Ser Arg Glu Arg Lys Glu  
                   35                  40                  45  
 Ala Pro Trp Asp Ala Gly Gly Arg Val Leu Gly Pro Gly Leu Gln Pro  
           50                  55                  60  
 Arg Thr Gly Ala Thr Ala Gly Pro Ser Pro Asp Arg Pro Arg Ala Gly  
           65                  70                  75                  80  
 Gly Gln Ala Arg Val Arg Cys Ala Ala Arg Pro Arg Ser Leu Thr Thr  
                   85                  90                  95  
 Val Pro Thr His Arg Gly Gly Pro  
           100

## 4443

&lt;210&gt; 4896

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4896

Leu Leu Ile Pro Met Pro Leu Cys Asp Pro Ile Leu Asn Thr Ala Arg  
 1 5 10 15

Ala Val Phe Gln Gln His Ser Ser Asn Leu Val Ser Ser Pro Leu Leu  
 20 25 30

His Ala Ser Val Ala Phe Pro Val Thr Trp His Gly Thr Arg Pro Gln  
 35 40 45

Leu Pro Tyr Ile Pro Ala Asn Ser Tyr Pro Thr Phe Leu Cys Ser His  
 50 55 60

Ser Phe Leu Phe Leu Pro His  
 65 70

&lt;210&gt; 4897

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4897

Gly Cys Gly Gly Phe Gln Cys Val Glu Trp Lys Gly Asn Cys Arg Ile  
 1 5 10 15

Val Ser Ala Pro His Ser Glu Gly Leu Leu Pro Val Pro Pro Arg Pro  
 20 25 30

Gly Ala Ser Thr Ala Ser Pro His Ser Thr Gln Met Pro Arg Ser Ser  
 35 40 45

Glu Leu Val Tyr Glu Lys Ser Pro Thr Phe Ser Pro Lys Thr Ser Leu  
 50 55 60

Leu Ser Leu His Lys Lys Lys Arg Lys Gly Thr Lys Glu Lys His Ser  
 65 70 75 80

Val Phe Leu Phe Leu Lys Lys Val Ser Pro Phe Leu Lys Ser Ser Asn  
 85 90 95

Glu Thr Leu Ser Gly Asn  
 100



## 4444

<210> 4898  
<211> 53  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (4)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4898  
Pro Gln Gln Xaa Thr Ser Gln Glu Val Glu Asn Ser Lys Gln Glu Lys  
1 5 10 15  
Tyr Gln Asn Asn Tyr Thr Gln Thr Ser Glu Asn Gln Arg Gln Lys Glu  
20 25 30  
Asn Leu Gln Arg Ser Gln Arg Lys Ser Asn Leu Thr Tyr Ser Lys Thr  
35 40 45  
Gly Gln Glu Leu Asn  
50

<210> 4899  
<211> 46  
<212> PRT  
<213> Homo sapiens

<400> 4899  
Gly Asn Asn Cys Arg Ser Ile Glu Val Thr Ala Lys Ile Phe Tyr Ser  
1 5 10 15  
Asn Trp Val Asn Pro Val Asn His Val Arg Asn Ser Ser Pro Arg Val  
20 25 30  
Ser Met Leu Leu Leu Tyr Phe Cys Lys His Asn Pro Leu Thr  
35 40 45

<210> 4900  
<211> 78  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (17)

## 4445

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4900

Leu Leu Phe Asn Leu Pro Ile Glu Leu Leu Gly Phe Lys Lys Tyr Phe  
1 5 10 15

Xaa Asn Asp Phe Leu Gly Leu Glu Ser Thr Phe Asn Thr Phe Lys Leu  
20 25 30

Val Phe Leu Leu Glu Ile Phe Arg Ile Ser Ser Leu Ile Gly Asn Leu  
35 40 45

Tyr Arg Ser Leu Val Arg Phe Val Ala Lys Met Cys His Arg Trp Thr  
50 55 60

Gln Ile Ser His Ser Gly Ala Ile Ser Tyr His Ser Gly Gly  
65 70 75

<210> 4901

<211> 48

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (3)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4901

Cys Leu Xaa Tyr Phe Xaa Met Asp Ile Glu Val Lys Met Ser Phe Ile  
1 5 10 15

Cys Ile Tyr Leu Gly Lys Glu Asp Met Leu Leu Lys Gln Gly Gln Met  
20 25 30

Tyr Met Ala Asp Ser Gln Cys Thr Ser Pro Gly Tyr Pro Gly Pro Met  
35 40 45

<210> 4902

## 4446

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (30)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4902

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | His | Lys | Ala | Ile | Arg | Leu | Ile | Ser | Gly | Glu | Leu | His | Thr | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Glu | Xaa | Lys | Phe | Leu | Ser | Pro | Trp | Ser | Thr | Pro | Ser | Xaa | Xaa | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Arg | Val | Pro | Phe | Met | Ser | Asn | Thr | Ala | Ser | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |

&lt;210&gt; 4903

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4903

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Tyr | His | Ser | Val | Ser | Gly | Phe | Leu | Val | Val | Tyr | Thr | Phe | Thr | Ile |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Lys | Cys | Phe | Lys | Ile | Ile | Gln | Leu | Phe | Lys | Glu | Thr | Tyr | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Lys | Asp | Thr | Leu | Glu | Met | Leu | Cys | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |

&lt;210&gt; 4904

&lt;211&gt; 103

&lt;212&gt; PRT

## 4447

&lt;213&gt; Homo sapiens

&lt;400&gt; 4904

Leu Val Arg Leu Gln Val Pro Val Arg Asn Ser Arg Val Asp Pro Arg

1

5

10

15

Val Arg Ser Val Pro Leu Trp Leu Leu Ser His Leu Lys Asn Asp Pro

20

25

30

Ser Gly Pro Phe Pro Pro Pro Cys Pro Leu Pro His Thr Ser Arg Phe

35

40

45

Pro Val Arg Gln Gln Val Gln Arg Leu Gln Asp Leu Ala Leu Leu Ser

50

55

60

Leu Leu Glu Pro Leu Lys Glu Lys Ala Gly Phe Glu Leu Phe Ala Phe

65

70

75

80

Glu Ser Trp Arg His Lys Arg Tyr Leu Gly Tyr Arg Ser Arg Arg Arg

85

90

95

Glu Arg Thr Pro Arg Ser Asn

100

&lt;210&gt; 4905

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4905

Phe Tyr Phe Ser Ser Lys Ser Leu Phe His Thr Cys Lys Ile Leu Gly

1

5

10

15

Arg Arg Phe Leu Lys Leu Cys Gln Glu Leu Leu Pro Ile Ser Lys Asn

20

25

30

Ser Leu Leu Cys Ser Lys Thr Thr Ile Ser Leu Arg Asp Cys Leu Lys

35

40

45

Gly Glu Arg Ala Thr Arg Glu Ile Ile His Ser Ala His Arg Asn Tyr

50

55

60

Cys Ser Ser Gly Leu Pro Ala Thr Val Phe Arg Cys Trp Val

65

70

75

&lt;210&gt; 4906

&lt;211&gt; 219

## 4448

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (40)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4906

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Val | Asp | Lys | Gln | Leu | Phe | Pro | Pro | Ser | Tyr | Gln | Glu | Lys | Cys | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Tyr | Ala | Thr | Pro | Ser | Ser | Glu | Asn | Val | Gln | Leu | Arg | Gln | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Thr | Lys | Lys | Asn | Leu | Xaa | His | Val | Asn | Lys | Ile | Leu | Lys | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Leu | Gln | Arg | Gln | Ala | Arg | Thr | Gly | Asn | Asn | Phe | Val | Lys | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Gly | Arg | Pro | Arg | Lys | Cys | Pro | Leu | Gln | Ala | Val | Val | Ser | Met |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ala | Phe | Gln | Ala | Ala | Gln | Phe | Val | Asn | Pro | Glu | Leu | Asn | Arg | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Gly | Ala | Ala | Leu | His | Leu | Ser | Pro | Asp | Thr | Val | Thr | Asp | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Glu | Ala | Val | Val | Gln | Ser | Val | Asn | Leu | Asn | Pro | Glu | His | Lys | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Lys | Arg | Lys | Gly | Trp | Leu | Leu | Glu | Glu | Gln | Thr | Arg | Lys | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Lys | Pro | Leu | Pro | Glu | Glu | Glu | Glu | Gln | Glu | Asn | Asn | Lys | Ser | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Glu | Ala | Pro | Val | Glu | Ile | Pro | Ser | Pro | Ser | Glu | Thr | Pro | Ala | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Glu | Pro | Glu | Ser | Thr | Leu | Gln | Pro | Val | Leu | Ser | Leu | Ile | Pro |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Glu | Lys | Lys | Pro | Pro | Arg | Pro | Pro | Lys | Lys | Lys | Tyr | Gln | Lys | Ala |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Tyr | Ser | Asp | Val | Tyr | Lys | Thr | Thr | Glu |
|     | 210 |     |     |     |     | 215 |     |     |     |     |

## 4449

&lt;210&gt; 4907

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4907

```

Ser His Cys Thr Val Asn Ser Lys Lys Ile Glu Glu Leu Phe Trp His
 1              5              10              15

Leu Lys Thr Ile Thr Gln Phe Ser Arg Glu Val Thr Asp Lys Arg Asp
              20              25              30

His Thr Asp Cys Phe Val Val Leu Val Leu Ser Tyr Ser Leu Met Gln
              35              40              45

Ile Arg Thr Phe Thr Ser Ile Cys Val Gly Pro Thr Leu Pro Gly Gln
              50              55              60

Ile Gln Leu Gln Ser Pro Cys Arg Tyr Glu Phe Ser Arg Asn Glu Pro
              65              70              75              80

Met Phe Ser Ala Arg Ile Asn Trp Ser Tyr Thr Ile Tyr Lys Asn Glu
              85              90              95

Tyr Cys Ile Leu Tyr Leu
              100

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&lt;210&gt; 4908

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4908

```

Gly Xaa Leu Val Arg Leu Gln Val Pro Val Arg Asn Ser Arg Val Asp
 1              5              10              15

Pro Arg Val Arg Gly Ser Pro Leu Leu Cys Ala Leu Ser Ser Val Met
              20              25              30

Arg Arg Glu Pro Phe Ala Val Cys Ser Val Gln Cys His Glu Thr Gly
              35              40              45

```

## 4450

Ala Leu Cys Cys Val Leu Cys Pro Val Ser  
 50 55

<210> 4909

<211> 200

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (67)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (112)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (148)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (177)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (183)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (195)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4909

Ala Arg Pro Ser Leu Arg Thr Cys Tyr Pro Arg Gly Asn Ile Thr Met  
 1 5 10 15

Ser Glu Ala Pro Arg Ala Glu Thr Phe Val Phe Leu Asp Leu Glu Ala  
 20 25 30

Thr Gly Leu Pro Ser Val Glu Pro Glu Ile Ala Glu Leu Ser Leu Phe  
 35 40 45

Ala Val His Arg Ser Ser Leu Glu Asn Pro Glu His Asp Glu Ser Gly

## 4451

|   |     |             |
|---|-----|-------------|
| 50  | 55  | 60          |
| Ala Leu Xaa Leu Pro Arg Val Leu Asp Lys Leu Thr Leu Cys Met Cys |     |             |
| 65  | 70  | 75 80       |
| Pro Glu Arg Pro Phe Thr Ala Lys Ala Ser Glu Ile Thr Gly Leu Ser |     |             |
|   | 85  | 90 95       |
| Ser Glu Gly Leu Ala Arg Cys Arg Lys Ala Gly Phe Asp Gly Ala Xaa |     |             |
|   | 100 | 105 110     |
| Val Arg Thr Leu Gln Ala Phe Leu Ser Arg Gln Ala Gly Pro Ile Cys |     |             |
|   | 115 | 120 125     |
| Leu Val Ala His Asn Gly Phe Asp Tyr Asp Phe Pro Leu Leu Cys Ala |     |             |
|   | 130 | 135 140     |
| Glu Leu Arg Xaa Leu Gly Ala Arg Leu Pro Arg Asp Thr Val Cys Leu |     |             |
|   | 145 | 150 155 160 |
| Asp Thr Leu Pro Ala Leu Arg Gly Leu Asp Arg Ala His Lys Pro Arg |     |             |
|   | 165 | 170 175     |
| Xaa Pro Gly Pro Gly Pro Xaa Arg Val Thr Ser Leu Gly Lys Leu Phe |     |             |
|   | 180 | 185 190     |
| Pro Pro Xaa Leu Ser Gly Lys Thr                                 |     |             |
|   | 195 | 200         |

&lt;210&gt; 4910

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4910

|   |    |       |
|---|----|-------|
| Pro Arg Val Ser Leu Pro Phe Arg Glu Arg Ala Glu Val Leu Thr Leu |    |       |
| 1   | 5  | 10 15 |
| Val Ala Cys Cys His Leu Ser Leu Ala Ser Ala Leu Val His Pro His |    |       |
|   | 20 | 25 30 |
| Ser Thr Leu Arg Ser His Ser His His Gln Arg Leu Asn Pro Lys Ala |    |       |
|   | 35 | 40 45 |
| Leu Gln Asp Leu Lys Val Pro Ser Glu Ala Ser Glu Ile Lys Tyr Cys |    |       |
|   | 50 | 55 60 |
| Ser Asn   |    |       |
| 65  |    |       |



4452

<210> 4911  
 <211> 41  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (13)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (26)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (27)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4911  
 Lys Gln Lys His Ile Tyr Phe Lys Lys Tyr Thr Ser Xaa Tyr Glu Ile  
     1                    5                    10                    15  
 Phe Ser Phe Glu Cys Met Leu Lys Trp Xaa Xaa Ser Arg Ile Ser Tyr  
                     20                    25                    30  
 Asn Thr Gly Tyr Leu Glu Thr Arg Tyr  
             35                    40

<210> 4912  
 <211> 255  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (65)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4912  
 Arg Glu Lys Ser Thr Phe Glu Cys Ser Glu Cys Gly Lys Ala Phe Ser  
     1                    5                    10                    15  
 Tyr Leu Ser Asn Leu Asn Gln His Gln Lys Thr His Thr Gln Glu Lys  
                     20                    25                    30

## 4453

Ala Tyr Glu Cys Lys Glu Cys Gly Lys Ala Phe Ile Arg Ser Ser Ser  
                   35                                  40                                  45  
 Leu Ala Lys His Glu Arg Ile His Thr Gly Glu Lys Pro Tyr Gln Cys  
           50                                  55                                  60  
 Xaa Glu Cys Gly Lys Thr Phe Ser Tyr Gly Ser Ser Leu Ile Gln His  
       65                                  70                                  75                                  80  
 Arg Lys Ile His Thr Gly Glu Arg Pro Tyr Lys Cys Asn Glu Cys Gly  
                                   85                                  90                                  95  
 Arg Ala Phe Asn Gln Asn Ile His Leu Thr Gln His Lys Arg Ile His  
                   100                                  105                                  110  
 Thr Gly Ala Lys Pro Tyr Glu Cys Ala Glu Cys Gly Lys Ala Phe Arg  
           115                                  120                                  125  
 His Cys Ser Ser Leu Ala Gln His Gln Lys Thr His Thr Glu Glu Lys  
       130                                  135                                  140  
 Pro Tyr Gln Cys Asn Lys Cys Glu Lys Thr Phe Ser Gln Ser Ser His  
       145                                  150                                  155                                  160  
 Leu Thr Gln His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys  
                   165                                  170                                  175  
 Asn Glu Cys Asp Lys Ala Phe Ser Arg Ser Thr His Leu Thr Glu His  
                   180                                  185                                  190  
 Gln Asn Thr His Thr Gly Glu Lys Pro Tyr Asn Cys Asn Glu Cys Arg  
           195                                  200                                  205  
 Lys Thr Phe Ser Gln Ser Thr Tyr Leu Ile Gln His Gln Arg Ile His  
       210                                  215                                  220  
 Ser Gly Glu Lys Pro Phe Gly Cys Asn Asp Cys Gly Lys Ser Phe Arg  
       225                                  230                                  235                                  240  
 Tyr Arg Ser Ala Leu Asn Lys His Gln Arg Leu His Pro Gly Ile  
                   245                                  250                                  255

&lt;210&gt; 4913

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 4454

&lt;221&gt; SITE

&lt;222&gt; (97)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4913

Leu Leu Glu Ala Gln Ala Gly Glu Gly Gly Arg Val Ser Arg Arg Ala  
1 5 10 15

Pro Leu Ser Leu Thr Gln Arg Ser Cys Val Phe Leu Val Lys Pro Ser  
20 25 30

His Ala Arg Gly Pro Ile Ala Ser Ser Pro Pro Ser Leu Pro Thr Asn  
35 40 45

Ile Pro Ser Pro Asp Pro Asn Ser Pro Pro His Tyr Pro Ala Leu Asp  
50 55 60

Leu Gly Asn Val Phe Leu Tyr Phe Asn Ile Ala Gln Gly Lys Asn Thr  
65 70 75 80

Tyr Ile Leu Arg Asp Leu Gly Trp Gly Lys Gln Lys Pro Cys Gly Val  
85 90 95

Xaa Lys Thr Lys Ala Tyr Phe Tyr Lys Cys Leu Met Phe Ser Pro Pro  
100 105 110

Gly Cys Ser Glu Thr Pro  
115

&lt;210&gt; 4914

&lt;211&gt; 186

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (135)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (151)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4455

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (177)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4914

Arg Ile Ser Gln Cys Leu Gly Arg Gly Glu Val Gln Glu Cys Val Leu  
 1 5 10 15

Arg Leu Asn His Ile Ile Leu Gln Arg Xaa Trp Ala Ala Arg His Ile  
 20 25 30

Val Asn Arg Ile Asn Ala Phe Lys Pro Thr Ala Asp Arg Pro Phe Val  
 35 40 45

Leu Gly Leu Pro Thr Gly Gly Thr Pro Met Thr Thr Tyr Lys Ala Leu  
 50 55 60

Val Glu Met His Lys Ala Gly Gln Val Ser Phe Lys His Val Val Thr  
 65 70 75 80

Phe Asn Met Asp Glu Tyr Val Gly Leu Pro Lys Glu His Pro Glu Ser  
 85 90 95

Tyr Tyr Ser Phe Met His Arg Asn Phe Phe Asp His Val Asp Ile Pro  
 100 105 110

Ala Glu Asn Ile Asn Leu Leu Asn Gly Asn Ala Pro Asp Ile Asp Ala  
 115 120 125

Glu Cys Arg Gln Tyr Glu Xaa Lys Ile Arg Ser Tyr Gly Lys Ile His  
 130 135 140

Leu Phe Met Gly Gly Val Xaa Asn Asp Gly His Ile Ala Phe Asn Glu  
 145 150 155 160

Pro Ala Ser Ser Leu Ala Ser Arg Thr Arg Ile Lys Thr Leu Thr His  
 165 170 175

Xaa His Ser Arg Arg Lys Leu Ser Phe Leu  
 180 185

&lt;210&gt; 4915

&lt;211&gt; 141

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4915

Gly Ile Leu Phe Ile Tyr Leu Asp Gly Ala Phe Asp Leu Cys Val Thr

## 4456

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ser Val Ser Lys Gly Gly Phe Glu Arg Glu Glu Thr Ala Thr Phe Ala | 20  | 25  | 30  |
| Leu Leu Tyr Arg Leu Arg Asn Ile Leu Phe Glu Arg Asn Arg Arg Val | 35  | 40  | 45  |
| Met Asp Val Ile Ser Arg Ser Gln Leu Tyr Leu Asp Asp Leu Phe Ser | 50  | 55  | 60  |
| Asp Tyr Tyr Asp Lys Pro Leu Ser Met Thr Asp Ile Ser Leu Lys Glu | 65  | 70  | 75  |
| Gly Thr His Ile Arg Val Asn Leu Leu Asn His Asn Ile Pro Lys Gly | 85  | 90  | 95  |
| Pro Cys Ile Leu Cys Gly Met Gly Asn Phe Lys Arg Glu Thr Val Tyr | 100 | 105 | 110 |
| Gly Cys Phe Gln Cys Ser Val Asp Gly Gln Lys Tyr Val Arg Leu His | 115 | 120 | 125 |
| Ala Val Pro Cys Phe Asp Ile Trp His Lys Arg Met Lys             | 130 | 135 | 140 |

&lt;210&gt; 4916

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4916

|   |    |    |    |    |
|---|----|----|----|----|
| Asn Ser Ala Arg Val Cys Ile Leu Ser Arg Asp Arg Val Ser Pro Cys | 1  | 5  | 10 | 15 |
| Trp Leu Gly Trp Cys Leu Ser Leu Asp Leu Val Ile His Pro Pro Gln | 20 | 25 | 30 |    |
| Pro Pro Arg Val Leu Gly Leu Gln Val Arg Ala Thr Ala Pro Gly Trp | 35 | 40 | 45 |    |
| Phe Ser   | 50 |    |    |    |

&lt;210&gt; 4917

&lt;211&gt; 212

&lt;212&gt; PRT

## 4457

<213> Homo sapiens

<220>

<221> SITE

<222> (96)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (106)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (165)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (169)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4917

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Tyr | Cys | Asn | Thr | Val | Gln | Leu | Asp | Ser | Gly | Ile | Asp | Tyr | Arg | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Glu | Leu | Pro | Ala | Ala | Gly | Lys | Leu | Tyr | Tyr | Leu | Thr | Ser | Glu | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Val | Glu | Ala | Val | Met | Asp | Lys | Leu | Phe | Asp | Glu | Leu | Ala | Gln | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asn | Asp | Leu | Thr | Arg | Pro | Arg | Ile | Leu | Lys | Val | Gln | Gly | Arg | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Leu | Asn | Lys | Ala | Cys | Gly | Thr | Val | Ala | Asp | Cys | Thr | Phe | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Cys | Glu | Arg | Pro | Leu | Gly | Ala | Ser | Asp | Tyr | Leu | Glu | Leu | Xaa |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asn | Phe | Asp | Thr | Ile | Phe | Leu | Arg | Xaa | Ile | Pro | Gln | Phe | Thr | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asn | Arg | Thr | Gln | Gly | Arg | Arg | Phe | Ile | Thr | Leu | Ile | Asp | Asn | Phe |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Asp | Leu | Lys | Val | Arg | Ile | Ile | Cys | Ser | Ala | Ser | Thr | Pro | Ile | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Phe | Leu | His | Gln | His | His | Asp | Ser | Glu | Leu | Glu | Gln | Ser | Arg |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4458

145                      150                      155                      160

Ile Leu Met Asp Xaa Leu Gly Leu Xaa Gln Asp Ser Ala Glu Gly Leu  
                                  165                      170                      175

Ser Met Phe Thr Gly Glu Glu Glu Ile Phe Ala Phe Gln Arg Thr Ile  
                                  180                      185                      190

Ser Arg Leu Thr Glu Met Gln Thr Glu Gln Tyr Trp Asn Glu Gly Asp  
                                  195                      200                      205

Arg Thr Lys Lys  
                                  210

&lt;210&gt; 4918

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (91)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4918

Met Gln Asn Ile Glu Arg Ile Phe Met Ile Leu Pro Asn Cys Lys His  
   1                                 5                                 10                                 15

Ser Ser Gln Ser Leu Ile Ala Leu Glu Cys Phe Leu Asp Glu Gln Val  
                                  20                                 25                                 30

Thr Ser Cys Lys Pro Thr Ser Glu Val Arg Lys Met Phe Ser His Val  
                                  35                                 40                                 45

Ser Cys Ser Cys Gln Ile Phe Lys Asn Pro Pro Ser Phe Asn His Pro  
                                  50                                 55                                 60

Val Gly Lys Met Cys Tyr Lys Thr Leu Pro Pro Gly Val Phe Trp Glu  
   65                                 70                                 75                                 80

Glu Cys Leu Lys Lys Lys Lys Lys Thr Ala Xaa Arg Lys Tyr Phe Gln  
                                  85                                 90                                 95

Ile Leu Tyr

&lt;210&gt; 4919

## 4459

<211> 224  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (140)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (142)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (206)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (224)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4919  
 Tyr Leu Asp Ala Glu Lys Met Gly Gln Lys Ala Ser Gln Gln Leu Ala  
     1                    5                    10                    15  
 Leu Lys Asp Ser Lys Glu Val Pro Val Val Cys Glu Val Val Ser Glu  
                     20                    25                    30  
 Ala Ile Val His Ala Ala Gln Lys Leu Lys Glu Tyr Leu Gly Phe Glu  
                     35                    40                    45  
 Tyr Pro Pro Ser Lys Leu Cys Pro Ala Ala Asn Thr Leu Asn Glu Ile  
                     50                    55                    60  
 Phe Leu Ile His Phe Ile Thr Phe Cys Gln Glu Lys Gly Val Asp Glu  
     65                    70                    75                    80  
 Trp Leu Thr Thr Thr Lys Met Thr Lys His Gln Ala Phe Leu Phe Gly  
                     85                    90                    95  
 Ala Asp Trp Ile Trp Thr Phe Trp Gly Ser Asp Lys Gln Ile Lys Leu  
                     100                    105                    110  
 Gln Leu Ala Val Gln Thr Leu Gln Met Ser Ser Pro Pro Pro Val Glu  
                     115                    120                    125  
 Ser Lys Pro Cys Asp Leu Ser Asn Pro Glu Ser Xaa Val Xaa Glu Ser  
     130                    135                    140



## 4460

Ser Trp Lys Lys Ser Arg Phe Asp Lys Leu Glu Glu Phe Cys Asn Leu  
 145 150 155 160

Ile Gly Glu Asp Cys Leu Gly Leu Phe Ile Ile Phe Gly Met Pro Gly  
 165 170 175

Lys Pro Lys Asp Ile Arg Gly Val Val Leu Asp Ser Val Lys Ser Gln  
 180 185 190

Met Val Arg Ser His Leu Pro Gly Gly Lys Ala Val Ala Xaa Phe Val  
 195 200 205

Leu Glu Thr Glu Asp Cys Val Phe Ile Lys Glu Leu Leu Lys Ile Xaa  
 210 215 220

<210> 4920

<211> 82

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (76)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4920

Thr Trp Lys Leu Phe Tyr Gln Ile Thr Val Leu His His Pro Pro Val  
 1 5 10 15

Cys Leu Val Ser Leu Ile Asn Gly Arg Gly Ile Ser Lys Leu Ser Phe  
 20 25 30

Leu Thr Pro Phe Glu Tyr Ser Val Phe Ala Ile Ile Asp Val Ala Pro  
 35 40 45

His Asn Ser Pro Thr Phe Ile Leu Lys Asn Gln Asn Leu Lys Asn Cys  
 50 55 60

Ser Ser Cys Gln Ser Val Met Thr His Leu Arg Xaa Ile Leu Phe Leu  
 65 70 75 80

Asp Val

## 4461

&lt;210&gt; 4921

&lt;211&gt; 41

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4921

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ser | Ser | Leu | Cys | Cys | Ser | His | Phe | Asn | Ser | Cys | His | Met | Phe | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gln | Phe | Phe | Glu | Phe | Ile | Ile | Phe | Gln | Ser | Cys | Leu | Tyr | Tyr | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | His | Lys | Asn | Phe | Lys | Phe | Val |
|     |     | 35  |     |     |     | 40  |     |     |

&lt;210&gt; 4922

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4922

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Tyr | Phe | Gln | Asn | Pro | Ser | Leu | Ser | Lys | Leu | Phe | Cys | Gly | Lys | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ile | Tyr | Phe | Ile | Asn | Val | Met | Cys | Leu | Ile | Leu | Asp | Leu | Phe | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Leu | Phe | Lys | Leu | Gly | Pro | Phe | Lys | Leu | Ile | Leu | Ser | Ser | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gly | Arg | Ser | Tyr | Leu | Ala | Asn | Glu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |

&lt;210&gt; 4923

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4923

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Glu | Gln | Ala | Met | Val | Asp | Ser | Gly | Ser | Tyr | Arg | Asn | Ser | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | His | Thr | Val | Val | Leu | Arg | Glu | Lys | Leu | Pro | Ile | Arg | Ser | Asn | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Pro | Leu | Met | Leu | Glu | Thr | Val | Asp | Gly | His | Pro | Leu | Ile | Asn | Gly |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4462

35                                      40                                      45  
 Pro Ile Thr Lys Glu Thr Ser Pro Val Gln Val Gln Ile Gly Asn His  
     50                                      55                                      60  
 Val Glu Glu Leu Gln Phe Asp Ile Ile His Ala Pro Arg Tyr Pro Leu  
     65                                      70                                      75                                      80  
 Ile Ile Gly Ile His Trp Leu Glu Thr His Asp Gln Thr  
                                     85                                      90

<210> 4924  
 <211> 43  
 <212> PRT  
 <213> Homo sapiens

<400> 4924  
 Lys Ala Asp Thr Gly Ala Ile Lys Asn Pro Gly Asp Gly Gly Cys Ser  
     1                                      5                                      10                                      15  
 Glu Leu Arg Ser Arg His Cys Pro Pro Ala Trp Ala Thr Arg Val Lys  
                                     20                                      25                                      30  
 Leu Cys Leu Lys Lys Gln Thr Asn Lys Cys Ile  
                                     35                                      40

<210> 4925  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<400> 4925  
 Trp His Pro Leu Ser Glu Ser Gln Ser Ser Leu Arg His Cys Tyr Lys  
     1                                      5                                      10                                      15  
 Arg Thr Leu Arg Lys Ile Trp Pro Tyr Glu Pro Ser Gln Pro Gln Ala  
                                     20                                      25                                      30  
 Lys Arg Met Thr Met Cys Val Ser Ala Ala His Gly Gln Phe Val Ser  
                                     35                                      40                                      45  
 His Cys Phe Gly Lys Pro Cys Val Pro Asn Gln Gly Arg Val Phe Gln  
                                     50                                      55                                      60  
 Gly Lys Val Asn Phe Pro Lys Phe Ile Lys Ile Glu Leu Gly Lys Pro  
     65                                      70                                      75                                      80

**4463**

Ser Ile Leu Asn Leu Phe Gln Ser Ser Gly His His Ser Tyr Phe Phe  
                                     85                                    90                                    95

Cys His Val Lys Glu Lys Phe Gln Ala Cys Ile Leu Ser Cys  
                                     100                                    105                                    110

<210> 4926  
 <211> 92  
 <212> PRT  
 <213> Homo sapiens

<400> 4926  
 Ser Pro Leu Arg Lys Ser Ser Gly Met Phe Ser Ile Ala Val Ser Phe  
     1                                    5                                    10                                    15  
 Pro Pro Lys Ile Thr Trp Leu Gly Ser Tyr Trp Ser Ser Gly Asn Leu  
                                     20                                    25                                    30  
 Ile Pro His Arg Asn Trp Arg Lys Gly Asn Ala Ser Arg Glu Glu Gln  
                                     35                                    40                                    45  
 Leu Tyr Phe Cys Leu Ser Asn Lys Pro Thr Asn Arg Phe Trp Tyr Glu  
                                     50                                    55                                    60  
 Leu Trp Arg His Lys Glu Asn Glu Cys Met Tyr Ser Lys Cys Thr Ser  
     65                                    70                                    75                                    80  
 Phe Phe Thr Leu Ser Trp Gln Lys Met Gln His Phe  
                                     85                                    90

<210> 4927  
 <211> 273  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (64)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4927  
 Xaa Leu Glu His Ile Pro Asn Phe Ser Leu Asp Asp Met Val Lys Leu

## 4464

|                 |                     |                     |                 |
|-----------------|---------------------|---------------------|-----------------|
| 1               | 5                   | 10                  | 15              |
| Val Glu Val     | Pro Asn Asp Gly Gly | Pro Leu Gly Ile His | Val Val Pro     |
|                 | 20                  | 25                  | 30              |
| Phe Ser Ala Arg | Gly Gly Arg Thr     | Leu Gly Leu Leu     | Val Lys Arg Leu |
|                 | 35                  | 40                  | 45              |
| Glu Lys Gly Gly | Lys Ala Glu His     | Glu Asn Leu Phe     | Arg Glu Asn Xaa |
|                 | 50                  | 55                  | 60              |
| Cys Ile Val Arg | Ile Asn Asp Gly Asp | Leu Arg Asn Arg     | Arg Phe Glu     |
|                 | 65                  | 70                  | 75              |
| Gln Ala Gln His | Met Phe Arg Gln     | Ala Met Arg Thr     | Pro Ile Ile Trp |
|                 | 85                  | 90                  | 95              |
| Phe His Val Val | Pro Ala Ala Asn     | Lys Glu Gln Tyr     | Glu Gln Leu Ser |
|                 | 100                 | 105                 | 110             |
| Gln Ser Glu Lys | Asn Asn Tyr Tyr     | Ser Ser Arg Phe     | Ser Pro Asp Ser |
|                 | 115                 | 120                 | 125             |
| Gln Tyr Ile Asp | Asn Arg Ser Val     | Asn Ser Ala Gly     | Leu His Thr Val |
|                 | 130                 | 135                 | 140             |
| Gln Arg Ala Pro | Arg Leu Asn His     | Pro Pro Glu Gln     | Ile Asp Ser His |
|                 | 145                 | 150                 | 155             |
| Ser Arg Leu Pro | His Ser Ala His     | Pro Ser Gly Lys     | Pro Pro Ser Ala |
|                 | 165                 | 170                 | 175             |
| Pro Ala Ser Ala | Pro Gln Asn Val     | Phe Ser Thr Thr     | Val Ser Ser Gly |
|                 | 180                 | 185                 | 190             |
| Tyr Asn Thr Lys | Lys Ile Gly Lys     | Arg Leu Asn Ile     | Gln Leu Lys Lys |
|                 | 195                 | 200                 | 205             |
| Gly Thr Glu Gly | Leu Gly Phe Ser     | Ile Thr Ser Arg     | Asp Val Thr Ile |
|                 | 210                 | 215                 | 220             |
| Gly Gly Ser Ala | Pro Ile Tyr Val     | Lys Asn Ile Leu     | Pro Arg Gly Ala |
|                 | 225                 | 230                 | 235             |
| Ala Ile Gln Asp | Gly Arg Leu Lys     | Ala Gly Asp Arg     | Leu Ile Glu Val |
|                 | 245                 | 250                 | 255             |
| Asn Gly Val Gly | Leu Val Gly Lys     | Ser Gln Glu Glu     | Val Val Ser Leu |
|                 | 260                 | 265                 | 270             |
| Leu             |                     |                     |                 |

## 4465

&lt;210&gt; 4928

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4928

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Arg | Xaa | Met | Lys | Glu | Glu | Val | Lys | Gly | Ile | Pro | Val | Arg | Val | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Cys | Arg | Pro | Leu | Val | Pro | Lys | Glu | Ile | Ser | Glu | Gly | Cys | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | Leu | Ser | Phe | Val | Pro | Gly | Glu | Pro | Gln | Val | Val | Val | Gly | Thr |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Ser | Phe | Thr | Tyr | Asp | Phe | Val | Phe | Asp | Pro | Ser | Thr | Glu | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Val | Phe | Asn | Thr | Ala | Val | Ala | Pro | Leu | Ile | Lys | Gly | Val | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gly | Tyr | Asn | Ala | Thr | Val | Leu | Ala | Tyr | Gly | Gln | Thr | Gly | Ser | Gly |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Tyr | Ser | Met | Gly | Gly | Ala | Tyr | Thr | Ala | Glu | Gln | Glu | Asn | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Thr | Val | Gly | Val | Ile | Pro | Arg | Val | Ile | Gln | Leu | Leu | Phe | Lys | Glu |
|     |     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Asp | Lys | Lys | Ser | Asp | Phe | Glu | Phe | Thr | Leu | Lys | Val | Ser | Tyr | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ile | Tyr | Asn | Glu | Glu | Ile | Leu | Asp | Leu | Leu | Cys | Pro | Ser | Arg | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

&lt;210&gt; 4929

## 4466

&lt;211&gt; 303

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (209)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (212)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4929

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Leu | Leu | Arg | Leu | Pro | Arg | Ser | Val | Val | Val | Met | Asp | Ser | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Asp | Glu | Leu | Ala | Leu | Ala | Phe | Ser | Arg | Thr | Ser | Met | Phe | Pro | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Asp | Ile | Ala | His | Tyr | Leu | Val | Ser | Val | Met | Ala | Val | Lys | Arg | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Ala | Ala | Ala | Leu | Ala | Trp | Lys | Asn | Pro | Ile | Ser | Ser | Trp | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ala | Met | Leu | His | Cys | Phe | Gly | Gly | Gly | Ile | Leu | Ser | Cys | Leu | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Glu | Pro | Pro | Leu | Lys | Phe | Leu | Ala | Asn | His | Thr | Asn | Ile | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Ser | Ser | Ile | Trp | Tyr | Ile | Thr | Phe | Phe | Cys | Pro | His | Asp | Leu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Gln | Gly | Tyr | Ser | Tyr | Leu | Pro | Val | Gln | Leu | Leu | Ala | Ser | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Glu | Val | Thr | Arg | Thr | Trp | Lys | Ile | Val | Gly | Gly | Val | Thr | His |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asn | Ser | Tyr | Tyr | Lys | Asn | Gly | Trp | Ile | Val | Met | Ile | Ala | Ile | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ala | Arg | Gly | Ala | Gly | Gly | Thr | Ile | Ile | Thr | Asn | Phe | Glu | Arg | Leu |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Lys | Gly | Asp | Trp | Lys | Pro | Glu | Gly | Asp | Glu | Trp | Leu | Lys | Met | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

## 4467

Tyr Pro Ala Lys Val Thr Leu Leu Gly Ser Val Ile Phe Thr Phe Gln  
 195 200 205

Xaa Thr Gln Xaa Leu Ala Ile Ser Lys His Asn Leu Met Phe Leu Tyr  
 210 215 220

Thr Ile Phe Ile Val Ala Thr Lys Ile Thr Met Met Thr Thr Gln Thr  
 225 230 235 240

Ser Thr Met Thr Phe Ala Pro Phe Glu Asp Thr Leu Ser Trp Met Leu  
 245 250 255

Phe Gly Trp Gln Gln Pro Phe Ser Ser Cys Glu Lys Lys Ser Glu Ala  
 260 265 270

Lys Ser Pro Ser Asn Gly Val Gly Ser Leu Ala Ser Lys Pro Val Asp  
 275 280 285

Val Ala Ser Asp Asn Val Lys Lys Lys His Thr Lys Lys Asn Glu  
 290 295 300

<210> 4930

<211> 82

<212> PRT

<213> Homo sapiens

<400> 4930

Val Met Val Ala Glu Thr Ser Ser Leu Tyr Phe Gly Ala Lys Thr Lys  
 1 5 10 15

Arg Gln His Lys Arg Lys Ser Ile Leu Ile Glu Tyr Phe Val Glu Gln  
 20 25 30

Arg Arg Leu Asp Lys Asn Cys Lys Pro Thr Asp Ser Ala Asn Lys Glu  
 35 40 45

Arg Asn Val Leu Ala Ile Arg His Val Ser Ser Glu Ser Lys Ser Asn  
 50 55 60

Asn Cys Arg Leu Gln Lys Lys Lys Val Phe Lys Asn Phe Ile Lys Thr  
 65 70 75 80

Gly His

<210> 4931

<211> 121



## 4468

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (74)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4931

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gly | Leu | Arg | Asp | Gly | Arg | Leu | Ser | Arg | Ile | Pro | Phe | Leu | Ser | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Leu | Leu | Glu | Pro | Leu | Ser | Lys | Gln | Trp | Gln | Gly | Thr | Glu | Arg |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gln | Gln | Glu | Ser | Gly | Arg | Gly | Leu | Ile | Ile | Thr | Lys | Lys | Thr | His |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ala | Arg | Asn | Arg | Leu | Cys | Ala | Pro | Val | Pro | Asp | Thr | Trp | Gln | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ser | Ser | Val | Thr | His | Val | Cys | Glu | Xaa | Ile | Ala | Gly | Ser | Thr | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ala | Trp | Pro | Ala | Gly | Ala | Ser | Ala | Ala | Asp | Pro | Met | Leu | Ser | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Trp | Gly | Ala | Ala | Pro | Gly | Arg | Leu | Phe | Trp | Gly | Arg | Leu | Ser | Tyr |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Trp | Ile | Val | Tyr | Thr | Leu | Leu | Cys |
|     | 115 |     |     |     |     |     | 120 |     |

&lt;210&gt; 4932

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4932

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Ser | Glu | Asn | Val | Lys | Leu | Ile | Asn | Pro | Leu | Leu | Val | Ser | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Thr | Thr | Cys | Leu | Arg | Lys | Leu | Leu | Asn | Phe | His | Val | Leu | Leu | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ser | Ser | Leu | Ile | Lys | Arg | Lys | Lys | Lys | Asn | Pro | Ala | Gln | Ala | Trp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Leu | Thr | Pro | Trp | His | Leu | Glu | Gly | Pro | Arg | Trp | Glu | Pro |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4469

50

55

60

&lt;210&gt; 4933

&lt;211&gt; 282

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4933

Asn Tyr Ser Leu Leu Arg Glu Arg Val Glu Met Val Gly Ile Leu Pro

1

5

10

15

Leu Cys Cys Ser Gly Cys Val Pro Ser Leu Cys Cys Ser Ser Tyr Val

20

25

30

Pro Ser Val Ala Pro Thr Ala Ala His Ser Val Arg Val Pro His Ser

35

40

45

Ala Gly His Cys Gly Gln Arg Val Leu Ala Cys Ser Leu Pro Gln Val

50

55

60

Phe Leu Lys Pro Trp Ile Phe Val Glu His Phe Ser Ser Trp Leu Ser

65

70

75

80

Leu Glu Leu Phe Ser Phe Leu Arg Tyr Leu Gly Thr Leu Leu Cys Ala

85

90

95

Cys Gly His Arg Leu Arg Glu Gly Leu Leu Leu Pro Cys Leu Leu Gly

100

105

110

Val Gly Ser Trp Leu Leu Phe Asn Asn Trp Thr Gly Gly Ser Trp Phe

115

120

125

Ser Leu His Leu Gln Gln Val Ser Leu Ser Gln Gly Ser His Val Ala

130

135

140

Ala Phe Leu Pro Glu Ala Ile Gly Pro Gly Val Pro Val Pro Val Ser

145

150

155

160

Gly Glu Ser Thr Ser Ala Gln Gln Ser His Ala Gly Trp Gln Leu Ser

165

170

175

Ala Glu Ala Asp Ala Cys Pro Ser Val Leu Tyr Ser Glu Val Leu Glu

180

185

190

Trp Asn Lys Asn Ile Asn Thr Tyr Thr Ser Phe His Asp Phe Cys Leu

195

200

205

Ile Leu Gly Ile Phe Leu Phe Cys Phe Val Leu Ala Val Ile Gly Leu

210

215

220

## 4470

Pro Tyr Ile Lys Pro Gly Leu Ser Leu Ser Val Ala Leu Leu Cys Lys  
 225 230 235 240

Ala Ser Tyr Tyr Ser Leu Val Trp Phe Ser Arg Thr Val Arg Ser Thr  
 245 250 255

Pro Gly Ala Val Cys Phe Leu Arg Leu Pro Gln His Lys Val Pro Tyr  
 260 265 270

His Cys Gln Pro Ser Ser Pro Asp Pro Lys  
 275 280

<210> 4934

<211> 54

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (41)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (49)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (53)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4934

Cys His Leu Asn Ser Ile His Trp Pro Ser Phe Tyr Asn Arg Arg Asp  
 1 5 10 15

Trp Glu Asn Pro Gly Val Thr Gln Leu Asn Arg Leu Ala Ala His Pro  
 20 25 30

Pro Phe Ala Ala Gly Val Ile Ala Xaa Lys Pro Ala Pro Ile Ala Leu  
 35 40 45

Xaa Asn Ser Cys Xaa Ala  
 50

<210> 4935

## 4471

&lt;211&gt; 292

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (201)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (242)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4935

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Gln | Arg | Leu | Ser | Leu | Val | Arg | Ser | Leu | Cys | Glu | Ser | Glu | Glu | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Leu | Glu | Gln | Val | His | Gly | Xaa | Glu | Glu | Arg | Ala | His | Gln | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Thr | Gln | Arg | Val | His | Trp | Ala | Glu | Ala | Leu | Gln | Lys | Leu | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ile | Arg | Thr | Gly | Leu | Val | Gly | Met | Leu | Thr | His | Leu | Asp | Asp | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Ile | Gln | Lys | Glu | Gln | Glu | Ile | Phe | Glu | Arg | Thr | Glu | Glu | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gly | Ile | Leu | Asp | Pro | Gln | Glu | Ser | Glu | Met | Leu | Asn | Phe | Asn | Glu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Thr | Arg | Ser | Pro | Leu | Leu | Thr | Gln | Leu | Trp | Ala | Thr | Ala | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Ser | Leu | Ser | Gly | Thr | Glu | Asp | Ile | Arg | Ile | Asp | Glu | Arg | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Pro | Phe | Leu | Gln | Leu | Ser | Asp | Asp | Arg | Lys | Thr | Leu | Thr | Phe |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Lys | Lys | Ser | Lys | Ala | Cys | Ala | Asp | Gly | Pro | Glu | Arg | Phe | Asp |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Trp | Pro | Asn | Ala | Leu | Ala | Ala | Thr | Ser | Phe | Gln | Asn | Gly | Leu | His |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4472

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 165 |  | 170 |  | 175 |
| Ala Trp Met Val Asn Val Gln Asn Ser Cys Ala Tyr Lys Val Gly Val |     |  |     |  |     |
|   | 180 |  | 185 |  | 190 |
| Ala Ser Gly His Leu Pro Arg Lys Xaa Ser Gly Ser Asp Cys Arg Leu |     |  |     |  |     |
|   | 195 |  | 200 |  | 205 |
| Gly His Asn Ala Phe Ser Trp Val Phe Ser Arg Tyr Asp Gln Glu Phe |     |  |     |  |     |
|   | 210 |  | 215 |  | 220 |
| Arg Phe Ser His Asn Gly Gln His Glu Pro Leu Gly Leu Leu Arg Gly |     |  |     |  |     |
|   | 225 |  | 230 |  | 235 |
| Pro Xaa Gln Leu Gly Val Val Leu Asp Leu Gln Val Gln Glu Leu Leu |     |  |     |  |     |
|   | 245 |  | 250 |  | 255 |
| Phe Tyr Glu Pro Ala Ser Gly Thr Val Leu Cys Ala His His Val Ser |     |  |     |  |     |
|   | 260 |  | 265 |  | 270 |
| Phe Pro Gly Pro Leu Phe Pro Val Phe Ala Val Ala Asp Gln Thr Ile |     |  |     |  |     |
|   | 275 |  | 280 |  | 285 |
| Ser Ile Val Arg   |     |  |     |  |     |
|   | 290 |  |     |  |     |

&lt;210&gt; 4936

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (37)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (39)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4936

|   |
|---|
| Asn Ala Tyr Gln Thr Ala Ser His Ala Ser Arg Lys Ile Phe Cys Glu |
| 1 5 10 15   |

|   |
|---|
| Arg Lys Ser Pro Ile Asp Val Ala Thr Leu Leu Leu Ser Tyr Phe Lys |
| 20 25 30  |

|   |
|---|
| Lys Leu Leu Gln Xaa Pro Xaa Pro Ser Ala Thr Thr Thr Leu Leu Ser |
|---|

## 4473

35

40

45

Gln Gln Pro Ser Arg  
50

&lt;210&gt; 4937

&lt;211&gt; 267

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (234)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (235)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (245)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (248)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (261)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (263)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4937

His Val Arg Glu Thr His Val Ala Gly Glu Val Gly Glu Arg Lys Val  
1 5 10 15

Gly Val Asn Thr Leu Trp Gly Ser Phe Glu Ile Ser Asn Val Arg Leu  
20 25 30

Ala Arg Val Met Leu Thr Gln Phe Ala Glu Gly Arg Leu Glu Asp Gln  
35 40 45

## 4474

```

Leu Asp Lys Tyr Asp His Trp Ala Asp Arg Phe Glu Asp Leu Pro Leu
  50                      55                      60

Tyr Phe Met Thr Phe His Gly Gln Gln Ser Ile Arg Thr Val Ile Asp
  65                      70                      75                      80

Thr Met Gln His Ala Val Tyr Val Tyr Asp Ile Cys His Val Ile Ile
                      85                      90                      95

Asp Asn Leu Gln Phe Met Met Gly His Glu Gln Leu Ser Thr Asp Arg
          100                      105                      110

Ile Ala Ala Gln Asp Tyr Ile Ile Gly Val Phe Arg Lys Phe Ala Thr
          115                      120                      125

Asp Asn Asn Cys His Val Thr Leu Val Ile His Pro Arg Lys Glu Asp
          130                      135                      140

Asp Asp Lys Glu Leu Gln Thr Ala Ser Ile Phe Gly Ser Ala Lys Ala
          145                      150                      155                      160

Ser Gln Glu Ala Asp Asn Val Leu Ile Leu Gln Asp Arg Lys Leu Val
          165                      170                      175

Thr Gly Pro Gly Lys Arg Tyr Leu Gln Val Ser Lys Asn Arg Phe Asp
          180                      185                      190

Gly Asp Val Gly Val Phe Pro Leu Glu Phe Asn Lys Asn Ser Leu Thr
          195                      200                      205

Phe Ser Ile Pro Pro Lys Asn Lys Ala Arg Leu Lys Lys Ile Lys Asp
          210                      215                      220

Asp Thr Gly Pro Val Ala Lys Lys Pro Xaa Xaa Gly Lys Lys Gly Ala
          225                      230                      235                      240

Thr Thr Gln Asn Xaa Glu Ile Xaa Ser Gly Gln Ala Pro Thr Pro Asp
          245                      250                      255

Gln Gln Thr Pro Xaa Ser Xaa Gln Ser Glu Gly
          260                      265

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&lt;210&gt; 4938

&lt;211&gt; 447

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

4475

&lt;221&gt; SITE

<222> (365)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4938

Gly Arg Ala Ser Gln Ala Pro Ser Ser Gly Leu Pro Ala Gly Gly Ala  
1 5 10 15

Asn Gly Glu Ser Pro Gly Gly Gly Ala Pro Phe Pro Gly Ser Ser Gly  
20 25 30

Ser Ser Ala Leu Leu Gln Ala Glu Val Leu Asp Leu Asp Glu Asp Glu  
35 40 45

Asp Asp Leu Glu Val Phe Ser Lys Asp Ala Ser Leu Met Asp Met Asn  
50 55 60

Ser Phe Ser Pro Met Met Pro Thr Ser Pro Leu Ser Met Ile Asn Gln  
65 70 75 80

Ile Lys Phe Glu Asp Glu Pro Asp Leu Lys Asp Leu Phe Ile Thr Val  
85 90 95

Asp Glu Pro Glu Ser His Val Thr Thr Ile Glu Thr Phe Ile Thr Tyr  
100 105 110

Arg Ile Ile Thr Lys Thr Ser Arg Gly Glu Phe Asp Ser Ser Glu Phe  
115 120 125

Glu Val Arg Arg Arg Tyr Gln Asp Phe Leu Trp Leu Lys Gly Lys Leu  
130 135 140

Glu Glu Ala His Pro Thr Leu Ile Ile Pro Pro Leu Pro Glu Lys Phe  
145 150 155 160

Ile Val Lys Gly Met Val Glu Arg Phe Asn Asp Asp Phe Ile Glu Thr  
165 170 175

Arg Arg Lys Ala Leu His Lys Phe Leu Asn Arg Ile Ala Asp His Pro  
180 185 190

Thr Leu Thr Phe Asn Glu Asp Phe Lys Ile Phe Leu Thr Ala Gln Ala  
195 200 205

Trp Glu Leu Ser Ser His Lys Lys Gln Gly Pro Gly Leu Leu Ser Arg  
210 215 220

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Gln | Thr | Val | Arg | Ala | Val | Ala | Ser | Ser | Met | Arg | Gly | Val | Lys |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

Asn Arg Pro Glu Glu Phe Met Glu Met Asn Asn Phe Ile Glu Leu Phe



## 4476

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 245 |     | 250 |     | 255 |     |     |     |     |     |     |     |     |     |     |
| Ser | Gln | Lys | Ile | Asn | Leu | Ile | Asp | Lys | Ile | Ser | Gln | Arg | Ile | Tyr | Lys |
|     | 260 |     |     |     |     |     | 265 |     |     |     |     |     | 270 |     |     |
| Glu | Glu | Arg | Glu | Tyr | Phe | Asp | Glu | Met | Lys | Glu | Tyr | Gly | Pro | Ile | His |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Ile | Leu | Trp | Ser | Ala | Ser | Glu | Glu | Asp | Leu | Val | Asp | Thr | Leu | Lys | Asp |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Val | Ala | Ser | Cys | Ile | Asp | Arg | Cys | Cys | Lys | Ala | Thr | Glu | Lys | Arg | Met |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Ser | Gly | Leu | Ser | Glu | Ala | Leu | Leu | Pro | Val | Val | His | Glu | Tyr | Val | Leu |
|     |     |     |     | 325 |     |     |     | 330 |     |     |     |     |     | 335 |     |
| Tyr | Ser | Glu | Met | Leu | Met | Gly | Val | Met | Lys | Arg | Arg | Asp | Gln | Ile | Gln |
|     |     | 340 |     |     |     |     |     | 345 |     |     |     |     | 350 |     |     |
| Ala | Glu | Leu | Asp | Ser | Lys | Val | Glu | Val | Leu | Thr | Tyr | Xaa | Lys | Ala | Asp |
|     | 355 |     |     |     |     |     | 360 |     |     |     |     | 365 |     |     |     |
| Thr | Asp | Leu | Leu | Pro | Glu | Glu | Ile | Gly | Lys | Leu | Glu | Asp | Lys | Val | Glu |
|     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| Cys | Ala | Asn | Asn | Ala | Leu | Lys | Ala | Asp | Trp | Glu | Arg | Trp | Lys | Gln | Asn |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Met | Gln | Asn | Asp | Ile | Lys | Leu | Ala | Phe | Thr | Asp | Met | Ala | Glu | Glu | Asn |
|     |     |     |     | 405 |     |     |     |     | 410 |     |     |     |     | 415 |     |
| Ile | His | Tyr | Tyr | Glu | Gln | Cys | Leu | Ala | Thr | Trp | Glu | Ser | Phe | Leu | Thr |
|     |     | 420 |     |     |     |     |     | 425 |     |     |     |     | 430 |     |     |
| Ser | Gln | Thr | Asn | Leu | His | Leu | Glu | Glu | Ala | Ser | Glu | Asp | Lys | Pro |     |
|     | 435 |     |     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |

&lt;210&gt; 4939

&lt;211&gt; 323

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (122)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4477

&lt;221&gt; SITE

&lt;222&gt; (219)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (234)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4939

Ala Ala Ala Ala Gln Gly Leu Val Arg Ala Gly Arg Arg Glu Leu Met

1

5

10

15

Ala Glu Glu Glu Ser Asp Gln Glu Ala Glu Arg Leu Gly Glu Glu Leu

20

25

30

Val Ala Ile Val Glu Ser Pro Leu Gly Pro Val Gly Leu Arg Ala Ala

35

40

45

Gly Asp Gly Arg Gly Gly Ala Gly Ser Gly Asn Cys Gly Gly Gly Val

50

55

60

Gly Ile Ser Ser Arg Asp Tyr Cys Arg Arg Phe Cys Gln Val Val Glu

65

70

75

80

Asp Tyr Ala Gly Arg Trp Gln Val Pro Leu Pro Gln Leu Gln Val Leu

85

90

95

Gln Thr Ala Leu Cys Cys Phe Thr Thr Ala Ser Ala Ser Phe Pro Asp

100

105

110

Glu Cys Glu His Val Gln Tyr Val Leu Xaa Ser Leu Ala Val Ser Phe

115

120

125

Phe Glu Leu Leu Leu Phe Phe Gly Arg Asp Glu Phe Tyr Glu Glu Pro

130

135

140

Leu Lys Asp Ile Leu Gly Ser Phe Gln Glu Cys Gln Asn His Leu Arg

145

150

155

160

Arg Tyr Gly Asn Val Asn Leu Glu Leu Val Thr Arg Ile Ile Arg Asp

165

170

175

Gly Gly Pro Trp Glu Asp Pro Val Leu Gln Ala Val Leu Lys Ala Gln

180

185

190

Pro Ala Ser Gln Glu Ile Val Asn Lys Tyr Leu Ser Ser Glu Asn Pro

195

200

205

Leu Phe Phe Glu Leu Arg Ala Arg Tyr Leu Xaa Ala Cys Glu Arg Ile

210

215

220

4478

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Ala | Met | Ala | Leu | Ile | Lys | Ser | Xaa | Ile | Asn | His | Pro | Glu | Ile |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

Ser Lys Asp Leu Tyr Phe His Gln Ala Leu Phe Thr Cys Leu Phe Met  
245 250 255

Ser Pro Val Glu Asp Gln Leu Phe Arg Glu Val Leu Phe Glu Thr Ile  
260 265 270

Phe Ala Tyr Tyr His Phe Asn Pro Thr Lys Lys Lys Pro Lys Lys Lys  
275 280 285

Ser Ser Pro Leu Leu Leu Leu Asn Ser Phe Tyr Ser Asn Ala Lys Asp  
290 295 300

Leu Arg Ile Thr Leu Ser Gly Cys Val Phe Phe Trp His His Asn Leu  
305 310 315 320

Arg Ser Cys

<210> 4940

<211> 35

<212> PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

 $\langle 222 \rangle$  (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (9)

<223> Xaa equals any of the naturally occurring L-amino acids

$\langle 220 \rangle$

<221> SITE

$\langle 222 \rangle$  (16)

<223> Xaa equals any of the naturally occurring L-amino acids

$\langle 220 \rangle$

&lt;221&gt; SITE

$\langle 222 \rangle$  (33)

<223> Xaa equals any of the naturally occurring L-amino acids

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

## 4479

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4940

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asn | Leu | Leu | Phe | Val | Gly | Phe | Xaa | Lys | Ser | Phe | Ala | Cys | Ile | Xaa |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Lys | Thr | Thr | Thr | Val | Tyr | Met | Leu | Leu | Pro | Leu | Ala | Asp | Glu | Leu |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |
|-----|-----|-----|
| Xaa | Xaa | Lys |
|     |     | 35  |

&lt;210&gt; 4941

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4941

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Gly | Pro | Val | Leu | Asp | Pro | Asp | Lys | Glu | Glu | Xaa | Thr | Met | Glu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Gly | Met | Ile | Glu | Thr | Arg | Gly | Leu | Val | Ala | Leu | Ile | Glu | Ala |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asp | Ala | Met | Val | Lys | Ala | Ala | Arg | Val | Lys | Leu | Val | Gly | Val | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ile | Gly | Gly | Gly | Leu | Cys | Thr | Ala | Met |
|     | 50  |     |     |     |     | 55  |     |     |     |

&lt;210&gt; 4942

&lt;211&gt; 48

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4942

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Lys | Cys | Phe | Tyr | Phe | Gly | Asn | Phe | Val | Met | Leu | Ser | Thr | Phe |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Ala | Gln | Phe | Ser | Arg | Leu | Arg | Ile | Asn | Leu | Leu | Phe | Leu | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

4480

Ser Thr Ala Asp Phe Ser Phe Lys Phe His Arg Leu Ser Thr Tyr Ile  
35 40 45

```
<210> 4943
<211> 80
<212> PRT
<213> Homo sapiens
```

```

<400> 4943
Trp Gln Asn Gly Arg Leu Ile Phe Ser Ile Ile Ile Gly Glu His Ile
  1             5             10             15
Ile Phe Trp Asn His Ala Ile Leu His Thr Val Lys Pro Leu Ile Phe
          20             25             30
Gln Gly Asn Ser Phe Arg Ile Trp Tyr Trp His Ala Val Ser Tyr Leu
      35             40             45
Ser Arg Ile Phe Gly Leu Ser Glu Arg Tyr Gln Phe Lys Ile Ser Gly
      50             55             60
Ser Val Arg Ile Phe Asp Pro Ser Gln Cys Gln Tyr Leu Met Asn His
      65             70             75             80

```

```
<210> 4944
<211> 42
<212> PRT
<213> Homo sapiens
```

```
<400> 4944
Lys Ser Ser Arg Lys Leu Leu Leu Lys Lys Thr Gly Tyr Leu Asn Ile
 1               5               10              15
Glu Ile Tyr Val Cys Cys Glu Phe Lys Glu Pro Val Ile Val Ser Phe
      20              25              30
Thr Lys Pro Ser Val Phe Asn Gly Cys Lys
      35              40
```

## 4481

&lt;210&gt; 4945

&lt;211&gt; 77

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4945

Arg Asn Val Asn Leu Cys Cys Phe Leu Cys Thr Ile Ala Ala Val Val  
 1 5 10 15

Ser Leu Leu Glu Ile Asn Ile Pro Tyr Tyr Asp Val Tyr Glu Tyr Arg  
 20 25 30

Phe Pro Phe Leu Pro Ser Leu Pro Pro Ser Pro Thr Phe Leu Phe Phe  
 35 40 45

Phe Ser Leu Ser Ala Ser Leu Phe Leu Leu Pro Ser Ser Leu Pro Leu  
 50 55 60

Ser Leu Leu Phe Leu Lys Ser Leu Ile Val Asn Lys Leu  
 65 70 75

&lt;210&gt; 4946

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4946

Asn Ser Phe Cys Tyr Phe His Ile Arg Val Gln Thr Tyr Lys Gly Ala  
 1 5 10 15

Cys Ser Leu Lys Val His Asn Tyr Ser Tyr Ser Val Cys Leu Tyr Cys  
 20 25 30

Tyr Arg Met Leu Cys Phe Gly Ala Leu Ser Ser Ala Asp Pro Arg Ser  
 35 40 45

Ser Val Glu Ile His Cys Leu Gly His Ser Leu Ile Arg Met Leu Ala  
 50 55 60

Gly Asp Phe Val Ser Asp Val Ala Ser Leu Phe Ser Val His Arg Leu  
 65 70 75 80

Arg Val Thr Thr Val Ala Cys Arg Val His Pro Val Gly Ala Ala Gln  
 85 90 95

Leu Ser Glu Ser Lys Asn Leu Pro Thr Tyr Ser Asn Val Phe Ala Leu  
 100 105 110

## 4482

&lt;210&gt; 4947

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4947

Leu Ala Ser Glu Ser Val Val Gln Leu Val Cys Thr Gly Leu Lys Ala  
 1 5 10 15

Gly Glu Trp Val Ile His His His Lys Gly Cys Pro Phe Phe Ala Val  
 20 25 30

Thr Ala Asp Ala Cys Gly Arg Arg Ala Gln Gly Ser His Tyr His Phe  
 35 40 45

Ser Leu Leu Thr Pro Arg Lys Leu Ser Thr Phe Leu Asp Thr Leu Phe  
 50 55 60

Lys Val Leu  
 65

&lt;210&gt; 4948

&lt;211&gt; 277

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4948

Val Ile Leu Asp Gly Leu Leu Thr Trp Gly Gln Phe Lys Gln His Tyr  
 1 5 10 15

Asn Arg His Phe Gly Phe Leu Gly Asp Phe Ile Gly Gln Val Gln Ser  
 20 25 30

Arg Lys Cys Ile Glu Asp Val Ile His Phe Ala Trp Glu Glu Lys Leu  
 35 40 45

Phe Leu Leu Ala Asp Glu Val Tyr Gln Asp Asn Val Tyr Ser Pro Asp  
 50 55 60

Cys Arg Phe His Ser Phe Lys Lys Val Leu Tyr Glu Met Gly Pro Glu  
 65 70 75 80

Tyr Ser Ser Asn Val Glu Leu Ala Ser Phe His Ser Thr Ser Lys Gly  
 85 90 95

## 4483

Tyr Met Gly Glu Cys Gly Tyr Arg Gly Gly Tyr Met Glu Val Ile Asn  
 100 105 110

Leu His Pro Glu Ile Lys Gly Gln Leu Val Lys Leu Leu Ser Val Arg  
 115 120 125

Leu Cys Pro Pro Val Ser Gly Gln Ala Ala Met Asp Ile Val Val Asn  
 130 135 140

Pro Pro Val Ala Gly Glu Glu Ser Phe Glu Gln Phe Ser Arg Glu Lys  
 145 150 155 160

Glu Ser Val Leu Gly Asn Leu Ala Lys Lys Ala Lys Leu Thr Glu Asp  
 165 170 175

Leu Phe Asn Gln Val Pro Gly Ile His Cys Asn Pro Leu Gln Gly Ala  
 180 185 190

Met Tyr Ala Phe Pro Arg Ile Phe Ile Pro Ala Lys Ala Val Glu Ala  
 195 200 205

Ala Gln Ala His Gln Met Ala Pro Asp Met Phe Tyr Cys Met Lys Leu  
 210 215 220

Leu Glu Glu Thr Gly Ile Cys Val Val Pro Gly Ser Gly Phe Gly Gln  
 225 230 235 240

Arg Glu Gly Thr Tyr His Phe Arg Met Thr Ile Leu Pro Pro Val Glu  
 245 250 255

Lys Leu Lys Thr Val Leu Gln Lys Val Lys Asp Phe His Ile Asn Phe  
 260 265 270

Leu Glu Lys Tyr Ala  
 275

<210> 4949

<211> 73

<212> PRT

<213> Homo sapiens

<400> 4949

Glu Asn Pro Ser Phe Thr Arg Arg Pro Asp Ser Phe Tyr Thr Ser Phe  
 1 5 10 15

Ile Met Leu Asp Cys Asn Lys Phe Gln Ile Leu Glu Trp Ala Tyr Leu  
 20 25 30



4484

Thr Asp Leu Thr Ile Leu Met Ile Ser Ile Arg Ile Thr Tyr Ser Lys  
35 40 45

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Lys | Ser | Gly | Lys | Thr | Leu | Leu | Val | Phe | Ile | Leu | Ile | Ser | Leu | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

Ser Phe Leu Asn Met Glu Ile Gln Trp  
65 70

<210> 4950

<211> 33

<212> PRT

<213> Homo sapiens

<400> 4950

Ser Pro Ala Lys Trp Leu Met Pro Glu Ile Pro Ala Leu Cys Glu Ala  
1 5 10 15

Lys Ala Gly Gly Ser Pro Glu Ala Arg Ser Ser Arg Val Ala Trp Ala  
20 25 30

Ala

<210> 4951

<211> 75

<212> PRT

<213> Homo sapiens

<400> 4951

Gly Arg Ala Val Leu Glu Ile Asp Trp Val Gly Leu Glu Pro Glu Phe  
1 5 10 15

Ile Phe Leu Ile Cys Ile Pro Gly Asp Ser Cys Glu Ser Asp Ala Phe  
20 25 30

Gly Asn His Cys Thr Lys Ser Tyr Leu Trp Val Leu Gln Thr Ala Ser  
35 40 45

Pro Glu Ala Ser Leu Gly Leu Arg Ile Phe Ser Ser Asn Val Leu Val  
50 55 60

Arg Ser Leu Ser Ile Leu Trp Gly Trp Leu Trp  
65 70 75

4485

&lt;210&gt; 4952

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4952

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Phe | Ser | Ile | Phe | Thr | Val | Leu | Val | Tyr | Phe | Phe | Pro | Val | Thr | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Met | Asn | Thr | Asn | Val | Val | Phe | Asn | Pro | Pro | Phe | Gln | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |

&lt;210&gt; 4953

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (24)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (43)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (57)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4953

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Leu | Asp | Cys | Gly | Ser | Pro | Ala | Ser | Ser | Thr | Pro | Tyr | Phe | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Glu | Leu | Pro | Gly | Asp | Xaa | Lys | Leu | Asp | Ala | Pro | Tyr | Asn | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | His | Pro | Phe | Ser | Ile | Asn | Asn | Leu | Met | Xaa | Glu | Gln | Thr | Pro | Ala |
|     |     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Lys | Leu | Asp | Val | Gly | Phe | Xaa | Gly | Tyr | Gly | Ala | Glu | Gly | Gly |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Pro | Gly | Val | Tyr | Tyr | Gln | Gly | Leu | Tyr | Ser | Arg | Ser | Leu | Leu | Asn |
| 65  |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |

Ala Ser

4486

&lt;210&gt; 4954

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (102)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (118)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4954

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Thr | Thr | His | Tyr | Arg | Glu | Ser | Trp | Tyr | Ala | Cys | Arg | Tyr | Arg | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ile | Pro | Gly | Ser | Thr | His | Ala | Ser | Asp | Cys | Phe | Val | Phe | Ser | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Tyr | Lys | Trp | Asn | Tyr | Ile | Val | Cys | Thr | Phe | Leu | Tyr | Ser | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Phe | Thr | Gln | Ile | Ile | Ile | Leu | Arg | Phe | Phe | Ser | Val | Val | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ile | Asn | Asn | Ser | Phe | Ile | Phe | Cys | Ser | Asn | Ile | Pro | Leu | Tyr | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Thr | Lys | Ile | Tyr | His | Ser | Phe | Ala | Asp | Glu | His | Leu | Gly | Tyr | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Phe | Tyr | Leu | Gln | Xaa | Lys | Leu | Leu | Arg | Ile | Leu | Val | Tyr | Glu | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Gly | His | Ile | Xaa | Ser | Phe |
|     |     | 115 |     |     |     |     | 120 |

&lt;210&gt; 4955

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4487

<220>  
 <221> SITE  
 <222> (32)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (36)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (39)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (42)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 4955  
 Phe Ile Asn Gly Lys Pro Glu Val Lys Lys Asp Leu Leu Glu Ala Gln  
           1                  5                  10                  15  
 Thr Asn Ile Ala Phe Leu Gln Ser Glu Leu Asp Ala Leu Lys Ser Xaa  
                   20                  25                  30  
 Tyr Ala Asp Xaa Ser Leu Xaa Thr Glu Xaa Asp Leu  
           35                  40

<210> 4956  
 <211> 68  
 <212> PRT  
 <213> Homo sapiens

<400> 4956  
 Asp Ser Gly Ala Ala Phe Ser Phe Gly Gly Leu Ala Phe Ile Val Glu  
           1                  5                  10                  15  
 Asn Ala Met Gly Ser Phe Gln Asn Gly Tyr Leu Ser Asn Leu Ser Ile  
                   20                  25                  30  
 Phe Gln Asn Ser Tyr Phe Phe Pro Ala His Gly Gln Thr Arg Glu Phe  
           35                  40                  45  
 Ser Ser Val Leu Arg His Glu Asn Leu Val Gly His Leu Lys Val Lys  
           50                  55                  60  
 Ser Val Asn Val

4488

65

&lt;210&gt; 4957

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (72)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (100)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4957

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Ala | Ala | Ser | His | Leu | Gly | Asn | Ile | Glu | Asn | Gln | Gly | Asn |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Lys | Ala | Gly | Arg | Ser | Val | Cys | Gln | Gln | Gly | Pro | Asn | Tyr | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Trp | Thr | Arg | Gly | Thr | His | Leu | Gln | Gly | Gly | Lys | Ser | Arg | Gly | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Gly | Asp | Trp | Pro | Lys | Val | Leu | Pro | Cys | Leu | Gln | Asp | Glu | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Leu | Ser | Pro | Ala | Phe | Xaa | Ala | Pro | Ala | Thr | Arg | Leu | Leu | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Asp | Pro | Ser | Leu | Pro | Leu | Ser | Ala | Ser | Ile | Gln | Val | Ala | Val | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Cys | Xaa | Ala | Leu | Ser | Cys | Leu | Cys | Ile | Leu | His | Lys | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |

&lt;210&gt; 4958

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

## 4489

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (28)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (34)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4958

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Arg | Xaa | Val | Lys | Ser | Phe | Cys | His | Tyr | Leu | His | Lys | Cys | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | His | Arg | Phe | Gln | Gln | Ser | Ala | Trp | His | Ile | Xaa | Gly | Cys | Ser | Met |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Xaa | Phe | Ile | Ile | Ile | Thr | Gln | Ile | Pro | Gln | Trp | Gln | Glu | Thr | Ser |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Tyr | Ile | Met | Glu | Asn | Ile | Tyr | Ile | Lys | Ser | His | Leu | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |

<210> 4959

<211> 44

<212> PRT

<213> Homo sapiens

<400> 4959

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ile | His | Ser | Leu | Gln | Gln | Phe | Asp | Lys | Ile | Tyr | Phe | Cys | Glu | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Leu | Arg | His | Leu | His | Phe | Leu | Pro | Met | Trp | Ser | Leu | Gln | Thr | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Ile | His | Glu | Tyr | Leu | Tyr | Cys | Met | Val | Ile |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     |

<210> 4960

<211> 55

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

## 4490

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4960

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ile | Phe | Xaa | Phe | Phe | Phe | Phe | Cys | Tyr | Thr | Lys | Ser | Arg | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Leu | Cys | Asn | Asn | Tyr | Ile | Thr | Ile | Gln | Tyr | Lys | Tyr | Cys | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Ile | Lys | Ile | Cys | Ser | Leu | Tyr | Asp | Arg | Ile | His | Leu | Lys | Thr |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Ile | Leu | Pro | Arg | Leu |
|     | 50  |     |     |     | 55  |     |

&lt;210&gt; 4961

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4961

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asn | Gln | Gly | Asp | His | Gln | Val | Lys | Leu | Lys | His | Lys | Ile | Ile | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Phe | Leu | Val | Lys | Asp | Val | Asn | Val | Gly | Phe | Pro | Thr | His | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Ser | Thr | His | His | Cys | Met | Leu | Gly | Thr | Ala | Val | Ser | Leu | Gly |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Glu | Leu | Lys | Glu | His | Thr | Asn | Phe | Trp | Ser | Val | Pro | Ala | Ala | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Ser | Phe | Cys | Tyr |
|     | 65  |     |     | 70  |     |

&lt;210&gt; 4962

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (59)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

**4491**

&lt;400&gt; 4962

Val Gln Pro Gln His Ala Cys Thr Gln Ala Leu Ile Lys Thr Ala Cys  
 1 5 10 15

Cys Ser Pro Leu Pro Arg Val Val Cys Trp Arg Ala Val Gly Val Arg  
 20 25 30

Thr Asp Thr Arg Thr Phe His Leu Pro Gly Ala Leu Ala Ser Ser Ile  
 35 40 45

Ser Phe Ser Thr Val Leu Lys Gln Asp Arg Xaa Ser Glu Arg Pro Val  
 50 55 60

Ile Cys Pro Lys Cys Cys Arg Arg Arg Leu Asn Val Leu Glu Ser Leu  
 65 70 75 80

Leu Ser His Leu His Tyr Asp Lys Ser Ile Val Pro Asn Arg  
 85 90

&lt;210&gt; 4963

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (45)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4963

Leu Ala His Ile Lys Ile Val Glu Pro His Thr Leu Asn Leu Ala Asn  
 1 5 10 15

Leu Val Thr Ala Gly Leu His Tyr Pro Val Leu Phe Phe Thr Arg Leu  
 20 25 30

Thr Leu Pro Cys Ser Trp Cys Cys Val Asp Leu Cys Xaa Lys His Asn  
 35 40 45

Arg Asn Ile  
 50

&lt;210&gt; 4964

&lt;211&gt; 41

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



## 4492

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (37)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4964

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ser | Val | Gln | Pro | His | Ser | Asp | Ile | Thr | Met | Arg | Ser | Trp | Ile | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Trp | Gly | Gly | Pro | Val | Arg | His | Leu | Leu | His | Pro | Trp | Asn | Trp |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ile | Leu | Glu | Xaa | Lys | Pro | Gly | Thr |
|     |     | 35  |     |     |     |     | 40  |     |

&lt;210&gt; 4965

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4965

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Arg | Gln | Ser | Ser | Gly | Ser | Ser | Ser | Pro | Ala | Ala | Tyr | Gly | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Cys | Leu | Asp | Pro | Ser | Ile | Arg | Lys | Thr | Tyr | Pro | Ser | Thr | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Lys | Ser | Ala | Asn | Leu | Asn | Pro | Lys | Met | Ala | Met | Ile | Ser | Val | Cys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |
|-----|-----|-----|
| Glu | Thr | Ser |
|     |     | 50  |

&lt;210&gt; 4966

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4966

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Phe | Leu | Val | Phe | Cys | Lys | Leu | Ser | Val | Ile | Phe | Ser | Ser | Leu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Met | Ala | Thr | Gln | Met | Val | Ala | Ala | Gln | Leu | Ala | Ser | Met | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Asn | Asn | Pro | Ser | Gln | Gln | Gln | Phe | Met | Gln | Phe | Gly | Gly | Ser | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

## 4493

Gly Ser Gln Leu Pro Gln Ile Gln Thr Asp Val Val Leu Pro Ser Cys  
 50 55 60  
 Lys Lys Lys Ala Pro Ala Glu Thr Pro Val Lys Glu Arg Leu Phe Ile  
 65 70 75 80  
 Val Phe Asn Pro His Pro Leu Pro Leu Asp Val Leu Glu Asp Ile Phe  
 85 90 95  
 Cys Arg Phe Gly Asn Leu Ile Glu Val Tyr Leu Val Ser Gly Lys Asn  
 100 105 110  
 Val Gly Tyr Ala Lys Tyr Ala Asp Arg Ile Ser Ala Asn Asp Ala Ile  
 115 120 125  
 Ala Thr Leu His Gly Lys Ile Leu Asn Gly Val Arg Leu Lys Val Met  
 130 135 140  
 Leu Ala Asp Ser Pro Arg Glu Glu Ser Asn Lys Arg Gln Arg Thr Tyr  
 145 150 155 160

<210> 4967  
 <211> 57  
 <212> PRT  
 <213> Homo sapiens

<400> 4967  
 Lys Ser Glu Thr Pro Ser Gln Glu Lys Lys Lys Lys Val Tyr Ser  
 1 5 10 15  
 Asn Arg Gln Ile Arg Gly Leu Arg Asp Pro Pro Leu Leu Leu Leu Pro  
 20 25 30  
 Glu Val Cys Arg Thr Val Tyr Arg Tyr Leu Leu Asp Arg Cys Pro Leu  
 35 40 45  
 Ser Tyr Phe Ile Cys Thr Val Ile Leu  
 50 55

<210> 4968  
 <211> 68  
 <212> PRT  
 <213> Homo sapiens

## 4494

&lt;400&gt; 4968

Met Ser Lys Gly Thr Pro Leu Asn Thr Lys Thr Phe Ser Ser Trp Gln  
1 5 10 15  
Thr Tyr Leu Ala Arg Ser Trp Arg Arg Val Arg Phe Gln Thr Met Leu  
20 25 30  
Pro Phe Cys Pro Cys Gln Tyr Val Leu Thr Asp Cys Asp Ser Ala Val  
35 40 45  
Asn Thr His Thr His Thr Gln Thr His Thr Gln Ala Pro Ser Val Tyr  
50 55 60  
Asp Gln Asp Lys  
65

&lt;210&gt; 4969

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4969

Pro Val Ser Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
1 5 10 15  
Lys Lys Ser Pro Gly Val Pro Asn Ser Val Phe Pro Glu Glu Glu Asp  
20 25 30  
Leu Ser Tyr Leu Leu Lys Gln Arg Ser Pro Phe Pro Val Val Ser Leu  
35 40 45  
Leu

&lt;210&gt; 4970

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4970

Ala Arg Thr Lys Lys Ile Pro Phe Leu Gly Val Cys Leu Gly Met Gln  
1 5 10 15  
Leu Ala Val Ile Glu Phe Ala Arg Asn Cys Leu Asn Leu Lys Asp Ala  
20 25 30

## 4495

Asp Ser Thr Glu Phe Arg Pro Asn Ala Pro Val Pro Leu Val Ile Asp  
           35                          40                          45  
 Met Pro Glu His Asn Pro Gly Asn Leu Gly Gly Thr Met Arg Leu Gly  
           50                          55                          60  
 Ile Arg Arg Thr Val Phe Lys Thr Glu Asn Ser Ile Leu Arg Lys Leu  
           65                          70                          75                          80  
 Tyr Gly Asp Val Pro Phe Ile Glu Glu Arg His Arg His Arg Phe Glu  
                           85                          90                          95  
 Val Asn Pro Asn Leu Ile Lys Gln Phe Glu Gln Asn Asp Leu Ser Phe  
                           100                          105                          110  
 Val Gly Gln Asp Val Asp Gly Asp Arg Met Glu Ile Ile Glu Leu Ala  
           115                          120                          125  
 Asn His Pro Tyr Phe Val Gly Val Gln Phe His Pro Glu Phe Ser Ser  
           130                          135                          140  
 Arg Pro Met Lys Pro Ser Pro Pro Tyr Leu Gly Leu Leu Leu Ala Ala  
           145                          150                          155                          160  
 Thr Gly Asn Leu Asn Ala Tyr Leu Gln Gln Gly Cys Lys Leu Ser Ser  
                           165                          170                          175  
 Ser Asp Arg Tyr Ser Asp Ala Ser Asp Asp Ser Phe Ser Glu Pro Arg  
                           180                          185                          190  
 Ile Ala Glu Leu Glu Ile Ser  
           195

&lt;210&gt; 4971

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (54)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (63)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4971

## 4496

Ala Ser Pro Gly Leu Gly Gly Ala Gln Ser Ser Val Leu His Asn Gly  
 1 5 10 15  
 Phe Phe His Gly Ser Pro Gly Glu Leu Leu Tyr Thr Gln Lys Ile Gln  
 20 25 30  
 Pro Leu Pro Ala Leu Ser Pro Phe Ser Leu Leu Leu Pro Phe Pro Met  
 35 40 45  
 Pro Arg Ser Arg Gln Xaa Leu Thr Phe Arg Thr Ser Ile Ala Xaa Leu  
 50 55 60  
 Ile Leu Arg Pro Leu Phe Lys Gly Gly  
 65 70

<210> 4972  
 <211> 301  
 <212> PRT  
 <213> Homo sapiens

<400> 4972  
 Lys Ser Pro Gln Cys His Cys Leu Asp Leu Leu Glu Lys Tyr Gly Gln  
 1 5 10 15  
 Gly Gly Asn Cys Thr Glu Gly Arg Met Val Phe Ser Tyr His Asn Ser  
 20 25 30  
 Phe Leu Ile Ala Asp Arg Asn Glu Ala Trp Ile Leu Glu Thr Ala Gly  
 35 40 45  
 Lys Tyr Trp Ala Ala Glu Lys Val Gln Glu Gly Val Arg Asn Ile Ser  
 50 55 60  
 Asn Gln Leu Ser Ile Thr Thr Lys Ile Ala Arg Glu His Pro Asp Met  
 65 70 75 80  
 Arg Asn Tyr Ala Lys Arg Lys Gly Trp Trp Asp Gly Lys Lys Glu Phe  
 85 90 95  
 Asp Phe Ala Ala Ala Tyr Ser Tyr Leu Asp Thr Ala Lys Met Met Thr  
 100 105 110  
 Ser Ser Gly Arg Tyr Cys Glu Gly Tyr Lys Leu Leu Asn Lys His Lys  
 115 120 125  
 Gly Asn Ile Thr Phe Glu Thr Met Met Glu Ile Leu Arg Asp Lys Pro  
 130 135 140  
 Ser Gly Ile Asn Met Glu Gly Glu Phe Leu Thr Thr Ala Ser Met Val

## 4497

```

145                150                155                160
Ser Ile Leu Pro Gln Asp Ser Ser Leu Pro Cys Ile His Phe Phe Thr
                165                170                175

Gly Thr Pro Asp Pro Glu Arg Ser Val Phe Lys Pro Phe Ile Phe Val
                180                185                190

Pro His Ile Ser Gln Leu Leu Asp Thr Ser Ser Pro Thr Phe Glu Leu
                195                200                205

Glu Asp Leu Val Lys Lys Lys Ser His Phe Lys Pro Asp Arg Arg His
                210                215                220

Pro Leu Tyr Gln Lys His Gln Gln Ala Leu Glu Val Val Asn Asn Asn
                225                230                235                240

Glu Glu Lys Ala Lys Ile Met Leu Asp Asn Met Arg Lys Leu Glu Lys
                245                250                255

Glu Leu Phe Arg Glu Met Glu Ser Ile Leu Gln Asn Lys His Leu Asp
                260                265                270

Val Glu Lys Ile Val Asn Leu Phe Pro Gln Cys Thr Lys Asp Glu Ile
                275                280                285

Gln Ile Tyr Gln Ser Asn Leu Ser Val Lys Val Ser Ser
                290                295                300

```

&lt;210&gt; 4973

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4973

```

Glu Leu Gln Gly Asn Glu Met Leu Gly Asp Leu Gln Ser Phe Leu Gly
 1                5                10                15

Ala Val Arg Ala Val Met Leu Asp Val Lys Ser Val Thr Trp Lys Ala
                20                25                30

Asn Trp Lys Pro Trp Met Lys Val Tyr His Ala Gln Asn Thr Lys Lys
                35                40                45

Asp Lys Ser Arg Arg His Arg Ala Ser Val Gly Phe Pro Glu Glu Glu
 50                55                60

Thr Ala
65

```

4498

&lt;210&gt; 4974

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4974

Cys Leu Thr Ser Leu Phe Ile Leu Asp Leu Asn Phe Ser Phe Leu Pro  
 1 5 10 15

Ser Pro Phe Thr Ser Ile Arg Arg Leu His His His Phe Phe Gly Pro  
 20 25 30

Leu Thr Leu Leu Ser Phe Pro Phe Ser Phe Ser Phe Phe Asn Arg Met  
 35 40 45

Ser Ser Ile Leu Ser Leu His Ser Pro Pro Asp Ala Val Asp Ser Ala  
 50 55 60

Met Leu Trp Ile  
 65

&lt;210&gt; 4975

&lt;211&gt; 129

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (82)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (90)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (124)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4975

Cys Phe Ser Pro Phe Leu Gln Met Phe Val Ser Ser Ser Gly Leu Pro  
 1 5 10 15

Pro Ser Pro Val Pro Ser Pro Arg Arg Phe Ser Ser Arg Arg Ser Gln

4499

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 20  |     |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Ser | Pro | Val | Lys | Cys | Ile | Arg | Pro | Ser | Val | Leu | Gly | Pro | Leu | Lys | Arg |
| 35  |     |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Gly | Glu | Met | Glu | Thr | Glu | Ser | Gln | Pro | Lys | Arg | Leu | Phe | Gln | Gly |
| 50  |     |     |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |
| Thr | Thr | Asn | Met | Leu | Ser | Pro | Asp | Ala | Ala | Gln | Leu | Ser | Asp | Leu | Ser |
| 65  |     |     |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ser | Xaa | Ser | Asp | Ile | Leu | Asp | Gly | Ser | Xaa | Ser | Ser | Ser | Gly | Leu | Ser |
| 85  |     |     |     |     |     |     | 90  |     |     |     |     | 95  |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ser | Asp | Pro | Leu | Ala | Lys | Gly | Ser | Ala | Thr | Ala | Glu | Ser | Pro | Val | Ala |
| 100 |     |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Cys | Ser | Asn | Ser | Cys | Ser | Ser | Phe | Ile | Leu | Met | Xaa | Asp | Leu | Ser | Pro |
| 115 |     |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Lys |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

```
<210> 4976
<211> 54
<212> PRT
<213> Homo sapiens
```

```
<220>
<221> SITE
<222> (37)
<223> Xaa equals any of the naturally occurring L-amino acids
```

```
<220>
<221> SITE
<222> (42)
<223> Xaa equals any of the naturally occurring L-amino acids
```

```
<220>
<221> SITE
<222> (54)
<223> Xaa equals any of the naturally occurring L-amino acids
```

<400> 4976  
Glu Arg Val Gln Val Asn Ala Asn Asp Val Leu Ala Thr Phe Ser Gln  
1 5 10 15

Lys Ile Leu His Trp Asn Thr Asp Cys Asn Ile Lys Leu Leu Cys Val  
20 25 30



**4500**

Tyr Cys Phe Tyr Xaa Cys Ile His Arg Xaa Val Phe Tyr Arg Tyr Ile  
35 40 45

Arg Ser Met Ala Leu Xaa  
50

<210> 4977

<211> 78

&lt;212&gt; PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

<222> (77)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4977

Val Ile Ala Val Gln Glu Pro Gly Val Pro Ser Arg Asp Pro Cys Leu  
1 5 10 15

Glu Ala Gln Glu Arg Pro Ala Ala Ser Met Pro Trp Asp Ala Arg Arg  
20 25 30

Pro Gly Gly Gly Ala Asp Gly Gly Pro Glu Ala Ser Gly Ala Ala Arg  
35 40 45

Ser Arg Ala Gln Lys Gln Cys Arg Lys Ser Ser Phe Ala Phe Tyr Gln  
50 55 60

Ala Val Arg Asp Leu Leu Pro Val Trp Leu Leu Gly Xaa Tyr  
65 70 75

<210> 4978

<211> 141

&lt;212&gt; PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

<222> (15)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4978

Arg Glu Gln Pro Ala Gly His Thr Pro Leu Pro Val Pro Ala Xaa Gln  
1 5 10 15

## 4501

Pro Val Asp Tyr Phe Ile Leu Ile Leu Gln Gly Arg Val Glu Val Glu  
                   20                                  25                                  30  
 Ile Gly Lys Glu Gly Leu Lys Phe Glu Asn Gly Ala Phe Thr Tyr Tyr  
                   35                                  40                                  45  
 Gly Val Ser Ala Leu Thr Val Pro Ser Ser Val His Gln Ser Pro Val  
                   50                                  55                                  60  
 Ser Ser Leu Gln Pro Ile Arg His Asp Leu Gln Pro Asp Pro Gly Asp  
                   65                                  70                                  75                                  80  
 Gly Thr His Ser Ser Ala Tyr Cys Pro Asp Tyr Thr Val Arg Arg Ser  
                                   85                                  90                                  95  
 Leu Ile Cys Ser Ser Ser Arg Leu Arg Asp Cys Ser Thr Ser Met His  
                                   100                                  105                                  110  
 Ser Trp Leu Pro Glu Pro Arg Thr Cys His Ser Pro Leu Arg Thr Pro  
                   115                                  120                                  125  
 Thr Cys Ser Tyr Ser Arg Gln Pro Asp Gln Ala Pro Trp  
                   130                                  135                                  140

&lt;210&gt; 4979

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4979

Lys Asp Leu Asp Asn Gln Thr Ile Ile Val Gly Asn Phe Asn Thr Pro  
           1                                  5                                  10                                  15  
 Leu Thr Val Leu Asp Arg Ser Leu Arg Gln Lys Thr Asn Lys Glu Met  
                   20                                  25                                  30  
 Leu Asp Leu Asn Ser Ala Leu Asn Gln Leu Lys Leu Ile Asp Lys Tyr  
                   35                                  40                                  45  
 Arg Thr Leu His Pro Lys Gly Met Leu Ile His Cys Trp Trp Lys Cys  
                   50                                  55                                  60  
 Lys Leu Val Gln Ala Leu Arg Lys Ala Val Trp Arg Phe Leu Lys  
                   65                                  70                                  75

&lt;210&gt; 4980

&lt;211&gt; 56

## 4502

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4980

Asp Pro Lys Cys Leu Gly Pro Lys Tyr Phe Gly Phe Phe Gln Ile Leu  
 1 5 10 15

Glu Tyr Leu His Tyr Thr Leu Met Ser Ile Ser Phe Glu His His Val  
 20 25 30

Gly Val Leu Lys Ala Ser Asp Phe Gly Ala Phe His Ile Leu Asp Phe  
 35 40 45

Gln Ile Arg Asp Ala Gln Pro Val  
 50 55

&lt;210&gt; 4981

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4981

Gly Xaa Tyr Gln Ala Asn Ile Ala Glu Leu Thr His Ala Asn Asn Arg  
 1 5 10 15

Val Asp Gln Asn Glu Ala Glu Val Lys Lys Leu Arg Leu Arg Val Glu  
 20 25 30

Glu Leu Lys Gln Gly Leu Asn Gln Lys Glu Asp Glu Leu Asp Asp Ser  
 35 40 45

Leu Asn Gln Ile Arg Lys Leu Gln Arg Ser Leu Asp Glu Glu Lys Glu  
 50 55 60

Arg Asn Glu Asn Leu Glu Thr Glu Leu Arg His Leu Gln Asn Trp  
 65 70 75

&lt;210&gt; 4982

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4503

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (100)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (102)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4982

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | His | Pro | Gly | Gly | Gly | Pro | Trp | Gly | Gly | Asp | Arg | Glu | Val | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Asn | Thr | Ala | Val | Leu | Ile | Leu | His | Ser | Met | Gly | Pro | His | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Gly | Gly | Ser | His | Cys | Ile | Cys | Trp | Leu | Arg | Ala | Pro | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ala | Ser | Arg | Ala | Pro | Gly | Leu | Leu | Cys | Leu | Leu | Ser | Val | Pro | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ile | Lys | Gly | Leu | Pro | Leu | Gly | Gly | Gln | Lys | Lys | Lys | Lys | Lys | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Lys | Xaa | Gly | Xaa | Pro | Phe |
|     |     |     | 100 |     |     |     |     |

&lt;210&gt; 4983

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4983

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Lys | Gln | Ile | Ala | Leu | Asn | Ala | Val | Tyr | Pro | Lys | Thr | Arg | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Cys | Pro | Ser | Thr | Leu | Tyr | Arg | Pro | Pro | Phe | Trp | Leu | Leu | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Cys | Ile | Phe | Cys | Tyr | Ile | Lys | Met | Gly | Pro | Arg | Leu | His | Leu | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asn | Tyr | Lys | Leu | Leu | Gly | Val | Gln | Gly | Cys | Val | Ser | Tyr | Ile | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

## 4504

Pro  
65

<210> 4984  
<211> 96  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (95)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4984  
Gly Val Lys Glu Ser Gly Val Thr Asn Val Val Ala Gly Ala Thr Leu  
1 5 10 15  
Lys Leu Cys Ser Val Pro Trp Lys Lys Glu Glu Glu Glu Glu Ala Lys  
20 25 30  
Leu Glu Gly Lys Ala Pro Gly Val Ser Ser Trp Asn Leu Arg Trp Glu  
35 40 45  
Glu Thr Leu Lys Val Ile Trp Ser Ser Ile Phe Gln Ser Met Phe His  
50 55 60  
Glu Leu Val Phe Gln Lys Trp Phe Pro Gly Leu Val Ser Gly Ser Ser  
65 70 75 80  
Met Arg Val Ala Val Val Tyr Phe Val His Arg Cys Ile Leu Xaa Asp  
85 90 95

<210> 4985  
<211> 77  
<212> PRT  
<213> Homo sapiens

<400> 4985  
Ala Ala Gly Ser Asn Ala Ser Gln Ala Glu His Ser Val Ser Arg Asp  
1 5 10 15  
Ser Cys Val Glu Gln Ile Arg Val His Ala Gln Val Pro Arg Leu Glu  
20 25 30

## 4505

Trp Leu Cys Gln Asn Pro Phe Lys Gly Phe Ser Phe Ser Leu Leu Gly  
                   35                  40                  45

Gln Asn Ile Leu Ser His Leu Gly Arg Phe Arg Met Gly Arg Ala Asn  
           50                  55                  60

Leu Asn Lys Arg Phe Phe Leu Tyr Pro Glu Ile Glu Gly  
   65                  70                  75

<210> 4986

<211> 287

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (189)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (193)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (201)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4986

Leu Leu Ala Pro Thr Arg Arg His Ser Pro Gly Ser Pro Ala Phe Ala  
   1                  5                  10                  15

Pro Ser Ser Arg Ala Thr Ala Met Cys Pro Arg Ala Ala Arg Ala Pro  
                   20                  25                  30

Ala Thr Leu Leu Ala Leu Gly Ala Val Leu Trp Pro Ala Ala Gly  
           35                  40                  45

Ala Trp Glu Leu Thr Ile Leu His Thr Asn Asp Val His Ser Arg Leu  
   50                  55                  60

Glu Gln Thr Ser Glu Asp Ser Ser Lys Cys Val Asn Ala Ser Arg Cys  
   65                  70                  75                  80

Met Gly Gly Val Ala Arg Leu Phe Thr Lys Val Gln Gln Ile Arg Arg  
                   85                  90                  95

## 4506

Ala Glu Pro Asn Val Leu Leu Leu Asp Ala Gly Asp Gln Tyr Gln Gly  
                   100                  105                  110  
 Thr Ile Trp Phe Thr Val Tyr Lys Gly Ala Glu Val Ala His Phe Met  
                   115                  120                  125  
 Asn Ala Leu Arg Tyr Asp Ala Met Ala Leu Gly Asn His Glu Phe Asp  
                   130                  135                  140  
 Asn Gly Val Glu Gly Leu Ile Glu Pro Leu Leu Lys Glu Ala Lys Phe  
                   145                  150                  155                  160  
 Pro Ile Leu Ser Ala Asn Ile Lys Ala Lys Gly Pro Leu Ala Ser Gln  
                   165                  170                  175  
 Ile Ser Gly Leu Tyr Leu Pro Tyr Lys Val Leu Pro Xaa Gly Asp Glu  
                   180                  185                  190  
 Xaa Val Gly Ile Val Gly Tyr Thr Xaa Lys Glu Thr Pro Phe Leu Ser  
                   195                  200                  205  
 Asn Pro Gly Thr Asn Leu Val Phe Glu Asp Glu Ile Thr Ala Leu Gln  
                   210                  215                  220  
 Pro Glu Val Asp Lys Leu Lys Thr Leu Asn Val Asn Lys Ile Ile Ala  
                   225                  230                  235                  240  
 Leu Gly His Ser Gly Phe Glu Met Asp Lys Leu Ile Ala Gln Lys Val  
                   245                  250                  255  
 Arg Gly Val Asp Val Val Val Gly Gly His Ser Asn Thr Phe Leu Tyr  
                   260                  265                  270  
 Thr Gly Asn Cys Phe Lys Arg Ile Ala Trp Ala Arg Met Ser Arg  
                   275                  280                  285

&lt;210&gt; 4987

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4987

Tyr Ala Ser Leu Gln Cys Tyr Trp Ser Lys Cys Met Ser Ile Ser Gln  
           1                  5                  10                  15  
 Arg Leu Tyr Pro Cys Ser Leu Thr Leu Gly Asn Leu Lys Ala Leu Ile  
                   20                  25                  30  
 Leu Leu Leu Ser Pro His Lys Glu Val Leu Leu Ser Gly Gly Arg Ala

## 4507

35                                      40                                      45  
 Asp Val Gly His Pro Thr Glu Asn Phe Arg Asn His Val Arg Asp Asp  
     50                                      55                                      60  
 Ala Ser His Glu Arg Leu Arg Ala Ser Phe Arg Phe Gly Asn Ile Leu  
     65                                      70                                      75                                      80

Lys

<210> 4988

<211> 119

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (66)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (103)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (110)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4988

Leu Ala Ser Ser Arg Gly Gln Arg Thr Asp Ile Leu Pro Thr Phe Gly  
     1                                      5                                      10                                      15

Gly Pro Arg Glu Ala Pro Gly Ala Lys Val Leu Ala Leu Val Pro Gly  
                     20                                      25                                      30

Thr Gln Glu Met Pro Ser Pro Val Gly Leu Leu Arg Ala Leu Pro Leu  
             35                                      40                                      45

Pro Trp Pro Gln Phe Leu Ala Cys Thr Leu Arg Arg Leu Ala Gly Pro  
     50                                      55                                      60

Arg Xaa Ser Thr Gly Pro Ser Gln Lys Pro Pro Pro Leu Cys Ser Val  
     65                                      70                                      75                                      80

Pro Cys Arg Val Pro Ala Asn Asp Gly Gly Gly Gly Pro Gly Lys Pro  
                     85                                      90                                      95



## 4508

Ser Ser Ala Leu Trp Thr Xaa Ser Ala Cys Tyr Ser Glu Xaa Gly Leu  
                   100                  105                  110

Glu Thr Ser Ser Ser Arg Ser  
                   115

<210> 4989  
 <211> 39  
 <212> PRT  
 <213> Homo sapiens

<400> 4989  
 Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Ala Ala Ala Leu Glu Leu  
   1                  5                  10                  15  
 Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg Gly Ala Thr Val Pro  
                   20                  25                  30  
 Gly Leu Pro Trp Leu Phe Ser  
                   35

<210> 4990  
 <211> 97  
 <212> PRT  
 <213> Homo sapiens

<400> 4990  
 Ala Phe Tyr Cys Arg Pro Ser Pro Glu Lys Gly Ala Arg Val Phe Pro  
   1                  5                  10                  15  
 Glu Pro Arg Cys Gln Gly Pro Arg Thr Pro Phe Thr Ala Asp Pro Leu  
                   20                  25                  30  
 Gln Arg Leu Gly Arg Gly Leu Trp Arg Thr Trp Phe Leu Leu Thr Val  
                   35                  40                  45  
 Leu Pro Leu Gly Pro Pro Ser Gln Thr Gln Thr Ile Gln Asp Pro Leu  
                   50                  55                  60  
 Ser Val Arg Pro Asn Gly Asn Ser Glu Ala Val Ile Phe Pro Pro Leu  
   65                  70                  75                  80  
 Pro Leu His Ser Leu Val Phe Cys Pro Leu Leu Cys Ser Ser Leu Pro  
                   85                  90                  95

Pro

## 4509

&lt;210&gt; 4991

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (74)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4991

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Lys | Leu | Val | Leu | Asp | His | Asp | Gly | Lys | Gly | Val | Leu | Glu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Phe | Gly | Ile | Thr | Asp | Arg | Thr | Asp | Phe | Leu | Ser | Leu | Ile | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ile | Tyr | Asn | Leu | Phe | Ser | Lys | Ser | Ala | Thr | Arg | Arg | Leu | His | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Asp | Lys | Thr | Leu | Val | Ser | Thr | Thr | Pro | Tyr | Leu | Asn | Pro | Asp | Ser |
|     | 50  |     |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Lys | Phe | Leu | Asp | Asn | Asn | Leu | Thr | Xaa | Ser | Ile | His | Ala | Asn | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

&lt;210&gt; 4992

&lt;211&gt; 137

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4992

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Pro | Thr | His | Pro | Lys | Pro | Arg | Thr | Arg | Leu | Phe | Ser | Leu | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Arg | Met | Arg | Arg | Ala | Gly | Leu | Gly | Glu | Gly | Val | Pro | Pro | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Tyr | Gly | Asn | Tyr | Gly | Tyr | Ala | Asn | Ser | Gly | Tyr | Ser | Ala | Cys | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Asn | Glu | Arg | Leu | Thr | Glu | Ser | Leu | Arg | Ser | Lys | Val | Thr | Ala |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4510

|   |  |     |  |     |
|---|--|-----|--|-----|
| 50  |  | 55  |  | 60  |
| Ile Lys Ser Leu Ser Ile Glu Ile Gly His Glu Val Lys Thr Gln Asn |  |     |  |     |
| 65  |  | 70  |  | 75  |
|   |  |     |  | 80  |
| Lys Leu Leu Ala Glu Met Asp Ser Gln Phe Asp Ser Thr Thr Gly Phe |  |     |  |     |
|   |  | 85  |  | 90  |
|   |  |     |  | 95  |
| Leu Gly Lys Thr Met Gly Lys Leu Lys Ile Leu Ser Arg Gly Ser Gln |  |     |  |     |
|   |  | 100 |  | 105 |
|   |  |     |  | 110 |
| Thr Lys Leu Leu Cys Tyr Met Met Leu Phe Ser Leu Phe Val Phe Phe |  |     |  |     |
|   |  | 115 |  | 120 |
|   |  |     |  | 125 |
| Ile Ile Tyr Trp Ile Ile Lys Leu Arg                             |  |     |  |     |
|   |  | 130 |  | 135 |

&lt;210&gt; 4993

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4993

|   |  |     |  |     |
|---|--|-----|--|-----|
| Ser Thr Leu Leu Leu Leu Pro Leu Pro Val Arg Pro Ala Phe Gly Glu |  |     |  |     |
| 1   |  | 5   |  | 10  |
|   |  |     |  | 15  |
| Lys Val Arg Leu Glu Leu Arg Arg Ala Ala Asn Pro Thr Val Pro Phe |  |     |  |     |
|   |  | 20  |  | 25  |
|   |  |     |  | 30  |
| Arg Cys Leu Val Leu Pro Leu Gln Pro Arg Thr Leu Thr Phe Lys Arg |  |     |  |     |
|   |  | 35  |  | 40  |
|   |  |     |  | 45  |
| Val Thr Ala Gly Arg Gln Gly Arg Gly Ser Arg Thr Leu Ser Glu Cys |  |     |  |     |
|   |  | 50  |  | 55  |
|   |  |     |  | 60  |
| Leu Ala Val Pro Trp Pro Val Arg Ala Ser Trp Leu Thr Phe Gln Leu |  |     |  |     |
|   |  | 65  |  | 70  |
|   |  |     |  | 75  |
|   |  |     |  | 80  |
| Ala Glu Leu Trp Asp Thr Ser Phe Leu Val Ser Cys Ala Arg Ser Tyr |  |     |  |     |
|   |  | 85  |  | 90  |
|   |  |     |  | 95  |
| Gly Lys Arg Glu Leu Gln Leu Arg Phe Ser Ser Ser Gln Thr Val Lys |  |     |  |     |
|   |  | 100 |  | 105 |
|   |  |     |  | 110 |

## 4511

&lt;210&gt; 4994

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4994

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Val | Ala | Leu | Trp | Leu | Lys | Phe | Phe | Asn | Leu | Glu | Met | Thr | Gln | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Arg | Arg | Cys | Ser | Asn | Thr | Thr | Tyr | Ser | Ala | Asn | Leu | Gly | Lys | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Gln | Leu | Ala | Arg | Phe | Pro | His | Tyr | Leu | Pro | Cys | Ile | His | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | His | Val | Phe | Phe | Ile | Arg | Met | Leu | Val | Lys | Phe | Trp | Leu | Leu | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

Ile

65

&lt;210&gt; 4995

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 4995

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Xaa | Cys | Val | Cys | Met | Gln | Thr | Tyr | Val | Asn | Thr | His | Ile | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Gly | Tyr | Asp | Asp | Asp | Asn | Tyr | Leu | Leu | Gln | Ile | Arg | Cys | Leu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |
|-----|-----|-----|
| Tyr | Val | Tyr |
|     |     | 35  |

&lt;210&gt; 4996

&lt;211&gt; 39

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4996

## 4512

Lys Ile Ile Ser Thr Phe Ile Leu Phe Thr Asn Lys Leu Pro Phe Lys  
 1 5 10 15

Lys Ile Lys Pro His Tyr Leu Asn Ile Lys Leu Pro Asn Asn Ile Val  
 20 25 30

Leu Lys Cys Thr Ile Leu Thr  
 35

<210> 4997

<211> 157

<212> PRT

<213> Homo sapiens

<400> 4997

Ala Ala Ala Cys Gly Leu Glu Thr Arg Glu Asp Gly Arg Gly Arg Gly  
 1 5 10 15

Leu Leu Val Phe Tyr Gly Pro Ser Thr Pro Thr Thr Thr His Ser Ser  
 20 25 30

Trp Arg Pro Arg Ala Thr Val Gly Leu Leu Gly Ile Leu Arg Leu Arg  
 35 40 45

Leu Val Glu Thr Pro Gly Asp Gly Gly Ala Leu Gly His Ser Glu Thr  
 50 55 60

Ala Leu Gly Gly Ala Pro Tyr Trp Pro Asp Trp Ile Ser Gln Pro Ala  
 65 70 75 80

Thr Gln Pro Gln Ala Thr Arg Lys Lys Pro Asp Leu Gly Asn Ser Ser  
 85 90 95

Ser Ser Phe Phe Phe Phe Phe Leu Ile Ala Leu Gly Asn Phe Pro Asn  
 100 105 110

Leu Gly Pro Ser Ser Phe Ser Lys Leu Arg Ser His Gly Leu Ser Pro  
 115 120 125

Ala Ser Pro Val Cys Thr Arg Arg Arg Phe Ile Phe Ser Pro Leu Val  
 130 135 140

Ser Phe Tyr Cys Leu Leu Arg Pro Ser Ser Cys Ser His  
 145 150 155

<210> 4998

<211> 44

## 4513

<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (38)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (40)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 4998  
Asn Tyr Arg Ser Lys Leu Phe Val Asp Asn Phe Arg Val Lys Phe Asp  
1 5 10 15  
Asn Leu Gly Tyr Leu Pro Asn Phe Lys Ile Glu Val Arg Ile Ser Val  
20 25 30  
Thr Gln Pro Trp Glu Xaa Trp Xaa Ser His Ile Arg  
35 40

<210> 4999  
<211> 44  
<212> PRT  
<213> Homo sapiens

<400> 4999  
Thr Glu Asp Leu Phe Gly Phe Lys His Leu Leu Arg Gln Tyr Leu Leu  
1 5 10 15  
Gly Lys Pro Asn Ile Ala Asn Gly Gln Phe Asp Phe Asn Phe Ser Lys  
20 25 30  
Asp Thr Leu Leu Ser Arg Arg Leu Lys Cys Leu His  
35 40

<210> 5000  
<211> 38  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (2)  
<223> Xaa equals any of the naturally occurring L-amino acids

## 4514

&lt;400&gt; 5000

Glu Xaa Val Leu Lys Pro Phe Ile Ser Phe Tyr Phe Ala Ile Cys Lys  
1 5 10 15

Cys Leu Leu Ser Ser Leu His Glu Val Ala Val Thr Phe Phe Thr Phe  
20 25 30

Lys Leu Pro Phe Tyr Phe  
35

&lt;210&gt; 5001

&lt;211&gt; 34

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5001

Pro Leu Leu Ser Leu His Val Ser Ile Glu Gly Ser Gly Ile Pro Gly  
1 5 10 15

Trp Gln Leu Met Asp Lys Arg His Tyr Ala Lys Ile Gln Phe Trp Ile  
20 25 30

Ser Tyr

&lt;210&gt; 5002

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5002

## 4515

Xaa Leu Gly Tyr Thr Xaa Xaa Lys Gly Thr Lys Ala Gly Val Thr Ala  
 1 5 10 15  
 Val Ala Ala Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Trp  
 20 25 30  
 His Glu Pro Lys Gly Thr Gln Cys Gly Met Thr Lys Tyr Leu Leu Ser  
 35 40 45  
 Glu Ser Thr Ala Phe Thr Tyr Leu Pro Val Phe Lys Ile Phe Val Lys  
 50 55 60  
 Ser Tyr Lys Lys Leu Gln Phe Asp Gln Ile Trp Val Tyr Ala Val Cys  
 65 70 75 80  
 Tyr Pro Gln Arg His Phe Glu Ser Ser Cys Asp Ala Phe Asn Asn Val  
 85 90 95  
 Leu Ser Leu Leu Ile Pro Leu Ser Asn Leu Ile Trp Tyr Ser Gln Asn  
 100 105 110  
 Ser Tyr Ser Leu Arg Gly Asn  
 115

&lt;210&gt; 5003

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (64)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5003

Val Cys Ile Tyr Phe Phe Ser Lys Glu Thr Ala Tyr Ile Phe His Val  
 1 5 10 15

Ser Met Phe Leu Arg Pro Trp Val Thr Val Gly Ile Ala Leu Met Gly



## 4516

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 20  |     | 25  |     | 30  |     |     |     |     |     |     |     |     |     |     |
| Ala | Xaa | Gln | Ala | Trp | Gly | Leu | Val | Leu | Ala | Leu | Asp | Leu | Glu | Gln | Gly |
|     | 35  |     | 40  |     | 45  |     |     |     |     |     |     |     |     |     |     |
| Thr | Ser | Pro | Ala | Gly | Leu | Gln | Phe | Ser | Pro | Leu | Xaa | Asn | Glu | Arg | Xaa |
|     | 50  |     | 55  |     | 60  |     |     |     |     |     |     |     |     |     |     |
| Glu | Leu | Ser | Asp | Leu | Lys | Ser | Phe | Gln |     |     |     |     |     |     |     |
|     | 65  |     | 70  |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 5004

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5004

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Asn | Ser | Ser | Leu | Gly | Leu | Ala | Leu | Ser | Val | Asp | Phe | Ser | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Arg | Arg | Lys | Pro | Thr | Arg | Leu | Glu | Leu | Lys | Leu | Asp | Asp | Ile | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Phe | Glu | Asn | Ile | Arg | Lys | Asp | Leu | Glu | Thr | Arg | Lys | Lys | Gln | Lys |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Asp | Val | Glu | Val | Val | Gly | Gly | Ser | Asp | Gly | Glu | Gly | Ala | Ile | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Ser | Ser | Asp | Pro | Lys | Ser | Arg | Glu | Gln | Met | Ile | Asn | Asp | Arg | Ile |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Tyr | Lys | Pro | Gln | Pro | Lys | Pro | Asn | Asn | Arg | Ser | Ser | Gln | Phe | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Leu | Glu | Phe |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 5005

&lt;211&gt; 281

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (251)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4517

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (263)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (277)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (278)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5005

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Leu | Leu | Gln | Lys | Asp | Ser | Leu | Leu | Thr | Ala | Ala | Gln | Leu | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Lys | Gly | Glu | Leu | Ser | Phe | Glu | Gln | Asp | Gln | Leu | Val | Ala | Gly | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Gly | Glu | Leu | His | Asn | Gly | Thr | Gln | Tyr | Arg | Glu | Val | Arg | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Cys | Ser | Gly | Ser | Gly | His | His | Leu | Val | Arg | Phe | Tyr | Phe | Leu | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Tyr | Ser | Glu | Tyr | Leu | Glu | Asp | Val | Leu | Glu | Glu | Leu | Thr | Tyr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Ala | Pro | Asp | Leu | Val | Ile | Ile | Asn | Ser | Cys | Leu | Trp | Asp | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Arg | Tyr | Gly | Arg | Cys | Ser | Met | Glu | Ser | Tyr | Arg | Glu | Asn | Leu | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Phe | Val | Arg | Met | Asp | Gln | Val | Leu | Pro | Asp | Ser | Cys | Leu | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Trp | Asn | Met | Ala | Met | Pro | Leu | Gly | Glu | Arg | Ile | Thr | Gly | Gly | Phe |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Pro | Glu | Leu | Gln | Pro | Leu | Ala | Gly | Ser | Leu | Arg | Arg | Asp | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Glu | Gly | Asn | Phe | Tyr | Ser | Ala | Thr | Leu | Ala | Gly | Asp | His | Cys | Phe |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Val | Leu | Asp | Leu | His | Phe | His | Phe | Arg | His | Ala | Val | Gln | His | Arg |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4518

|   |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|
|   | 180 |     | 185 |     | 190 |     |
| His Arg Asp Gly Val His Trp Asp Gln His Ala His Arg His Leu Ser |     |     |     |     |     |     |
| 195   |     | 200 |     | 205 |     |     |
| His Leu Leu Leu Thr His Val Ala Asp Ala Trp Gly Val Glu Leu Pro |     |     |     |     |     |     |
| 210   |     | 215 |     | 220 |     |     |
| Lys Arg Gly Tyr Pro Pro Gly Glu Pro Tyr His Lys Trp Gly Gly Ser |     |     |     |     |     |     |
| 225   |     | 230 |     | 235 |     | 240 |
| Asp Ala Leu Gly Pro Ser Glu Asp Arg Ala Xaa Lys Gln Asn Gly Thr |     |     |     |     |     |     |
|   | 245 |     | 250 |     | 255 |     |
| Gln Pro Leu Lys Gly Ser Xaa Gly Pro Leu Lys Asp Ser Cys Gly Phe |     |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |     |
| Cys Met His Leu Xaa Xaa Pro Leu Arg                             |     |     |     |     |     |     |
|   | 275 |     | 280 |     |     |     |

&lt;210&gt; 5006

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (27)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (37)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (45)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5006

|   |
|---|
| Arg Tyr Tyr Leu Ile Ile Ile Lys Ile Arg Gly His Ser Phe Glu Pro |
| 1 5 10 15   |

## 4519

Ser Leu Thr Phe Gln Phe Lys Leu Gly Pro Xaa Pro Ser Lys Xaa Leu  
                   20                  25                  30

Gly Phe Arg His Xaa Pro Leu Val Leu Ala Gly Leu Xaa  
           35                  40                  45

<210> 5007

<211> 95

<212> PRT

<213> Homo sapiens

<400> 5007

Asn Met Tyr Gly Thr Ser Cys Leu Ile Leu His Val Thr Ser Leu Leu  
   1                  5                  10                  15

Tyr Ile Asp Glu Val Leu Val Thr Leu Ser Ser Asn Thr Leu Pro Leu  
           20                  25                  30

Leu Phe Arg Glu Cys Leu Arg Asp Phe Leu Tyr Trp Phe Tyr Tyr Ser  
           35                  40                  45

Asp Tyr Gly Leu Asp Leu Ser Ile Leu Leu Leu Pro Pro Gly Phe Leu  
           50                  55                  60

Ile Ile His Pro Ser Lys Leu Ile Phe Cys Glu Ala Phe Val Ser Gln  
   65                  70                  75                  80

Ile Lys Thr Leu Leu Glu Pro Lys Val Val Ala Asp Gly Tyr Leu  
                   85                  90                  95

<210> 5008

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5008

Leu Pro Lys Gln Ile Leu Asp Arg His Cys Ile Tyr Trp Tyr Gly Ser  
   1                  5                  10                  15

Gly Leu Tyr Gly Val Val Cys Thr His Leu Gly Leu Phe Ser Leu Asn  
           20                  25                  30

Pro Ala Pro Asn Glu Ser Gly Gly Arg Val His Ser Ile Ser Phe Asn  
           35                  40                  45

Val Val Met His His Lys Leu Asn Ile Arg Met Lys Met Lys Leu Asp  
           50                  55                  60

## 4520

Phe Asp Val Ser Leu Lys Pro Phe Pro Cys Pro Ile His Ser Pro Pro  
 65 70 75 80

Pro Pro

<210> 5009

<211> 83

<212> PRT

<213> Homo sapiens

<400> 5009

Ser Leu Ser Ser Pro Ala Val Lys Met Leu Ile Met Ile Leu Thr Leu  
 1 5 10 15

Lys Ile Arg Pro His Lys Glu Gln Gly Asn Ser Arg Gly Gly Thr Gln  
 20 25 30

Leu Gly Glu Ser Arg Pro Gly Gln Gly Lys Glu Thr His Lys Pro Asn  
 35 40 45

Arg Ala Ala Leu Gly Lys Val Leu Ile Ser Trp Cys Cys Phe Leu Ser  
 50 55 60

His Met Pro Ile Pro Gln Ala Val Pro Leu Ser Trp Leu Cys Arg Met  
 65 70 75 80

Ser Ser Ser

<210> 5010

<211> 76

<212> PRT

<213> Homo sapiens

<400> 5010

Tyr Pro Ser Val Thr Ser Gly Thr Phe Arg Arg Lys Pro Asn Ser Ser  
 1 5 10 15

Val Trp Cys Thr Arg Ser Ser Asp Val Phe Pro Pro Pro Asn Val Leu  
 20 25 30

Val Lys Gln Thr Tyr Thr Ser Ser Glu Ala Thr Phe Gly Gln Ala Ser  
 35 40 45

Arg Leu Gly Lys Cys Cys Thr Leu Cys Ile Lys Cys Ala Ser His Pro

## 4521

50                                      55                                      60  
 Ser Pro Leu Gly Lys Phe Leu Cys Ile Leu Gln Ala  
 65                                      70                                      75  
  
 <210> 5011  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (69)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5011  
 Pro Ile Ile Pro Met Phe Thr Gln Asn Ile Arg Glu Gly Phe Arg Ser  
 1                                      5                                      10                                      15  
 Leu Gly Gly Thr Arg Leu Phe Arg Trp Leu Tyr Glu Lys Phe Arg Tyr  
                                     20                                      25                                      30  
 Pro Phe Ala Pro Met Tyr Gly Gly Phe Pro Val Lys Leu Arg Thr Tyr  
                                     35                                      40                                      45  
 Leu Gly Asp Pro Ile Pro Tyr Asp Pro Gln Ile Thr Ala Glu Glu Leu  
                                     50                                      55                                      60  
 Ala Glu Lys Thr Xaa Asn Ala Val Gln Ala Leu Ile Asp Lys His Gln  
 65                                      70                                      75                                      80  
 Arg Ile Pro Gly Asn Ile Met Ser Ala Leu Leu Glu Arg Phe His  
                                     85                                      90                                      95

<210> 5012  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 5012  
 Ala Ala Arg Ala Leu Ser Leu Ser Leu Ser Pro Glu Val Asp Phe Pro  
 1                                      5                                      10                                      15  
 Val Pro Pro Gly Arg Gly Arg Ser Val Glu Ser Val Gln Ser Gln Pro  
                                     20                                      25                                      30  
 Gln Glu Pro Val Ser Val Pro Gln Thr Leu Thr Ser Thr Leu Glu His

## 4522

35                                      40                                      45  
 Ile Val Gly Gln Leu Asp Val Leu Thr Gln Thr Val Ser Ile Leu Glu  
     50                                      55                                      60  
 Gln Arg Leu Thr Leu Thr Glu Asp Lys Leu Lys Gln Cys Leu Glu Asn  
     65                                      70                                      75                                      80  
 Gln Gln Leu Ile Met Gln Arg Ala Thr Pro  
                                     85                                      90  
  
 <210> 5013  
 <211> 178  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5013  
 His Glu Leu Arg Arg Arg Met Leu Glu Ala Ala Asp Phe Ala Ala Arg  
     1                                      5                                      10                                      15  
 Lys His Arg Gln Gln Arg Arg Lys Asp Pro Glu Gly Thr Pro Tyr Ile  
                                     20                                      25                                      30  
 Asn His Pro Ile Gly Val Ala Arg Ile Leu Thr His Glu Ala Gly Ile  
                                     35                                      40                                      45  
 Thr Asp Ile Val Val Leu Gln Ala Ala Leu Leu His Asp Thr Val Glu  
     50                                      55                                      60  
 Asp Thr Asp Thr Thr Leu Asp Glu Val Glu Leu His Phe Gly Ala Gln  
     65                                      70                                      75                                      80  
 Val Arg Arg Leu Val Glu Glu Val Thr Asp Asp Lys Thr Leu Pro Lys  
                                     85                                      90                                      95  
 Leu Glu Arg Lys Arg Leu Gln Val Glu Gln Ala Pro His Ser Ser Pro  
                                     100                                      105                                      110  
 Gly Ala Lys Leu Val Lys Leu Ala Asp Lys Leu Tyr Asn Leu Arg Asp  
                                     115                                      120                                      125  
 Leu Asn Arg Cys Thr Pro Glu Gly Trp Ser Glu His Arg Val Gln Glu  
     130                                      135                                      140  
 Tyr Phe Glu Trp Ala Ala Gln Val Val Lys Gly Leu Gln Gly Thr Asn  
     145                                      150                                      155                                      160  
 Arg Gln Leu Glu Glu Ala Leu Lys His Leu Phe Lys Gln Arg Gly Leu  
                                     165                                      170                                      175

## 4523

Thr Ile

<210> 5014

<211> 62

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (7)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (15)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5014

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ile | Phe | Ala | Val | Met | Xaa | Ser | Phe | Asn | Val | Ser | Phe | Gln | Xaa | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ile | Lys | Val | Phe | Leu | Tyr | Leu | Val | Asn | Lys | Asp | His | Ser | Cys | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Arg | Gly | Cys | Ile | His | Arg | Leu | Trp | Glu | Ala | Val | Val | Cys | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Val | Ser | Ile | Ser | Ile | Phe | Tyr | Val | Tyr | Asn | Ser | Ala | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |

<210> 5015

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5015

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Ala | Leu | Gly | Ala | Gly | Gly | Ala | Phe | Ser | Val | Pro | Leu | Leu | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Ser | Ala | Ser | Leu | Val | Leu | Pro | Ala | His | Phe | His | Asn | Val | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Cys | Ile | Gly | Ile | Val | Cys | Cys | Leu | Asp | Pro | Trp | Pro | Arg | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |



## 4524

Ser Leu Pro Val Arg Glu Thr Lys Leu Thr Thr Lys Gly Phe Cys Gln  
 50 55 60

Ile Ala Phe Ile Tyr Arg Ile Cys Pro Phe Met Cys Leu Cys Val Tyr  
 65 70 75 80

Gly Leu Asn Gly Phe Leu Thr Ser Lys Lys  
 85 90

<210> 5016

<211> 51

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (10)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (14)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (36)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5016

Val Tyr Arg Val Leu Lys Pro Leu Lys Xaa Asn Ala Asn Xaa Ala Lys  
 1 5 10 15

Ser Leu Leu Leu Thr Thr Ile Pro Gln Ile Gly Ser Thr Glu Trp Ser  
 20 25 30

Glu Thr Leu Xaa Asn Leu Lys Asn Met Ala Gln Phe Ser Val Leu Leu  
 35 40 45

Pro Arg His  
 50

<210> 5017

<211> 333

<212> PRT

<213> Homo sapiens

## 4525

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (144)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5017

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Arg | Ala | Gln | Arg | Ser | Thr | Pro | Arg | Ser | Leu | Ala | Arg | Val | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Arg | Gly | Pro | Thr | Arg | Tyr | Ala | Asp | Ala | Pro | Thr | Pro | Ile | Arg | Pro |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gln | Asp | Ser | Thr | Met | Thr | Leu | Asn | Asn | Val | Thr | Met | Arg | Gln | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Val | Gly | Met | Gln | Pro | Gln | Gln | Gln | Arg | Trp | Ser | Ile | Pro | Ala | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | His | Leu | Met | Val | Gln | Lys | Glu | Pro | His | Gln | Tyr | Ser | His | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Arg | His | Ser | Ala | Thr | Pro | Glu | Asp | His | Cys | Arg | Arg | Ser | Trp | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asp | Ser | Thr | Asp | Ser | Val | Ile | Ser | Ser | Glu | Ser | Gly | Asn | Thr | Tyr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Arg | Val | Val | Leu | Ile | Gly | Glu | Gln | Gly | Val | Gly | Lys | Ser | Thr | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asn | Ile | Phe | Ala | Gly | Val | His | Asp | Ser | Met | Asp | Ser | Asp | Cys | Xaa |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Gly | Glu | Asp | Thr | Tyr | Glu | Arg | Thr | Leu | Met | Val | Asp | Gly | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ala | Thr | Ile | Ile | Leu | Leu | Asp | Met | Trp | Glu | Asn | Lys | Gly | Glu | Asn |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Trp | Leu | His | Asp | His | Cys | Met | Gln | Val | Gly | Asp | Ala | Tyr | Leu | Ile |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Tyr | Ser | Ile | Thr | Asp | Arg | Ala | Ser | Phe | Glu | Lys | Ala | Ser | Glu | Leu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ile | Gln | Leu | Arg | Arg | Ala | Arg | Gln | Thr | Glu | Asp | Ile | Pro | Ile | Ile |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Gly | Asn | Lys | Ser | Asp | Leu | Val | Arg | Cys | Arg | Glu | Val | Ser | Val |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

## 4526

Ser Glu Gly Arg Ala Cys Ala Val Val Phe Asp Cys Lys Phe Ile Glu  
 245 250 255  
 Thr Ser Ala Ala Val Gln His Asn Val Lys Glu Leu Phe Glu Gly Ile  
 260 265 270  
 Val Arg Gln Val Arg Leu Arg Arg Asp Ser Lys Glu Lys Asn Glu Arg  
 275 280 285  
 Arg Leu Ala Tyr Gln Lys Arg Lys Glu Ser Met Pro Arg Lys Ala Arg  
 290 295 300  
 Arg Phe Trp Gly Lys Ile Val Ala Lys Asn Asn Lys Asn Met Ala Phe  
 305 310 315 320  
 Lys Leu Lys Ser Lys Ser Cys His Asp Leu Ser Val Leu  
 325 330

<210> 5018  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 5018  
 Glu Pro Leu Trp Glu Asn Leu Phe Leu Pro Pro Leu Gly Lys Gln Lys  
 1 5 10 15  
 Asn Phe Ser Val Phe Gly Glu Tyr Phe Arg Asn Ser Asn Glu Arg His  
 20 25 30  
 Cys Phe Ser Cys Trp Leu Thr Gly Leu Lys Gly Ala Phe Val Leu Leu  
 35 40 45  
 Gly Gln Gly Glu Arg Gly Asp Pro Arg Lys Val Ser Leu Pro Glu Asp  
 50 55 60  
 Gly Gln Pro Pro Gly Leu Gln Leu Gln Val His Ile Thr Arg Thr Ala  
 65 70 75 80  
 Trp Gln Pro Gly Pro Pro Gly Ala His Ser Arg Gln Pro Leu Pro Arg  
 85 90 95  
 Gly Leu Ile Leu Gln  
 100

<210> 5019  
 <211> 52

## 4527

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5019

Arg Tyr Leu Ile Ser Leu Ser Cys Asn Leu Tyr Leu Gln Thr Gly Val  
1 5 10 15

Ser Asn Pro Ile Asn Leu Ile Ala Asp Ile Val Arg Lys Asn Glu Met  
20 25 30

Thr Ser Val Lys Thr Gln Asn Tyr Thr Tyr Lys Val Ser Arg Gln Asn  
35 40 45

Met Leu Leu Leu  
50

&lt;210&gt; 5020

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5020

Pro Val Asp Ser Cys Ala Val Ser Pro Gly Val Ala Lys Glu Ala Ala  
1 5 10 15

Ser Gly Ser Trp Gly Leu Val Ala Arg Ser Gln Gln Glu Cys Leu Leu  
20 25 30

Tyr Phe Val Arg Asp Ala Glu Gln Ile Ser Asn Ser Val Ala Val Met  
35 40 45

Leu Ala Ser  
50

&lt;210&gt; 5021

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5021

Thr Ser Ser Thr Ile Asn Cys Ser Leu Gly Thr Phe Tyr Ala Gln Asn  
1 5 10 15

Cys Ala Pro Ser Ser Glu Gln Gln Val Phe Asn Gly Pro Cys Asp Glu  
20 25 30

Lys Gly Pro Ile Lys Ala Ala Gly Met Gly His Ser Pro Thr Pro His

## 4528

35                                      40                                      45  
 Gly Pro Gly His Cys His Ser Cys Cys Pro Ala Ser Pro Gly Leu Trp  
     50                                      55                                      60  
 Leu His Gly Arg Ser His Phe Cys Lys Lys Phe Thr Phe Leu Lys  
     65                                      70                                      75

<210> 5022  
 <211> 79  
 <212> PRT  
 <213> Homo sapiens

<400> 5022  
 Asn Leu Lys Pro Pro Leu Glu Pro Pro Phe Cys Arg Val Phe Gly Lys  
     1                                      5                                      10                                      15  
 Arg Lys Lys Gly Leu Cys Leu Arg Leu Trp Gly Arg Gly Asp Tyr Val  
                     20                                      25                                      30  
 Thr Ser Val Gln Thr Ala Gly Asn Leu Lys Thr Val Leu Ser Leu Phe  
                     35                                      40                                      45  
 Leu Tyr Ile Val Phe Ile Tyr Lys Lys Lys Arg Leu Arg Met His Ala  
                     50                                      55                                      60  
 Lys Leu Leu Phe Ser Val Ser His Arg Pro Arg Trp Asn Val Lys  
     65                                      70                                      75

<210> 5023  
 <211> 141  
 <212> PRT  
 <213> Homo sapiens

<400> 5023  
 Leu Leu Gln Val Asp Phe His Asn Met Gln Ser Gly Gly Gly Val Lys  
     1                                      5                                      10                                      15  
 Thr Asp Asp Thr Ser Thr Leu Asn Ser Leu Cys Gly Tyr Ala Trp Val  
                     20                                      25                                      30  
 Tyr Val Trp Glu Glu Lys Gln Arg Cys Arg Leu Ser Ser Phe Phe Ser  
                     35                                      40                                      45  
 Ser Ser Ala Ser Ile Pro Gly Leu Leu Pro Ser His Thr Leu Asp Leu  
                     50                                      55                                      60

## 4529

Val Gln Asn Val Gly Val Val Leu Asp Glu Ala Leu Gly Trp Gly Arg  
 65 70 75 80

Glu Arg Glu Leu Cys Val Lys Cys Leu Leu Glu Met His Cys Gly Val  
 85 90 95

Phe Ser Cys Met Gly Asn His Leu Cys Gln Ala Phe Pro His Phe Pro  
 100 105 110

Tyr Leu Ser His Leu Val Ser Cys Leu Cys Phe Gln Leu Cys Val Ile  
 115 120 125

Leu Phe Ala Ser Cys Thr Lys Leu Ile Phe Ser Lys Val  
 130 135 140

<210> 5024  
 <211> 30  
 <212> PRT  
 <213> Homo sapiens

<400> 5024  
 Gly Thr Arg Val Ser Asp Leu Ala Thr Ile Ser Leu Gly Ser Cys Gln  
 1 5 10 15

Asn Leu Ile Phe Ser Leu Lys Thr Pro Ile Cys Ser His Ser  
 20 25 30

<210> 5025  
 <211> 241  
 <212> PRT  
 <213> Homo sapiens

<400> 5025  
 Ile Phe Gly Met Ser Lys Leu Arg Met Val Leu Leu Glu Asp Ser Gly  
 1 5 10 15

Ser Ala Asp Phe Arg Arg His Phe Val Asn Leu Ser Pro Phe Thr Ile  
 20 25 30

Thr Val Val Leu Leu Leu Ser Ala Cys Phe Val Thr Ser Ser Leu Gly  
 35 40 45

Gly Thr Asp Lys Glu Leu Arg Leu Val Asp Gly Glu Asn Lys Cys Ser  
 50 55 60

Gly Arg Val Glu Val Lys Val Gln Glu Glu Trp Gly Thr Val Cys Asn  
 65 70 75 80

## 4530

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Gly | Trp | Ser | Met | Glu | Ala | Val | Ser | Val | Ile | Cys | Asn | Gln | Leu | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Cys | Pro | Thr | Ala | Ile | Lys | Ala | Pro | Gly | Trp | Ala | Asn | Ser | Ser | Ala | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Gly | Arg | Ile | Trp | Met | Asp | His | Val | Ser | Cys | Arg | Gly | Asn | Glu | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ala | Leu | Trp | Asp | Cys | Lys | His | Asp | Gly | Trp | Gly | Lys | His | Ser | Asn | Cys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Thr | His | Cys | Glu | Pro | Arg | Asn | Ala | Thr | Pro | Trp | Lys | Pro | His | Thr | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Leu | Ser | Pro | Ser | Val | Leu | Ile | Pro | Val | Leu | Leu | Thr | Val | Ser | Pro | Ser |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Trp | Leu | Phe | Leu | Glu | Ser | Leu | Ser | Phe | Pro | His | Phe | His | Phe | Leu | Pro |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Tyr | Cys | His | Leu | Trp | Pro | Gly | Phe | Ala | Leu | Leu | Val | Gln | His | Pro |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Gln | Leu | Gln | His | Leu | Cys | Leu | Ser | Ala | Pro | Ser | Thr | Arg | Gln | Lys | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Thr | Leu | Glu | Asn | Ile | Arg | His | Ser | Glu | Ser | Arg | Val | Leu | Gly | Ser | Asp |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

Gly

&lt;210&gt; 5026

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (43)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

**4531**

&lt;400&gt; 5026

```

Ile Arg Gln Cys Val Lys His Trp His Thr Asn Ala Ala Lys Gly Ala
 1             5             10             15

Glu Gly Arg Gln Trp Gly Gly Ala Gly Thr Gln Gln Gly Ala Leu Pro
      20             25             30

Arg Asp Thr Leu Val Ile Phe Ser Thr Glu Xaa His Pro Xaa Ala Phe
      35             40             45

Leu Gln His Leu
      50

```

&lt;210&gt; 5027

&lt;211&gt; 196

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (51)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5027

```

Gly Gly Ser Glu Asp Gln Leu Glu Asp Pro Ala Leu Ser Gly Lys Ala
 1             5             10             15

Trp Glu Cys Glu Met Gly Arg Arg Gly Trp Asp Leu Gly Gly Trp Gly
      20             25             30

Gln Ala Leu Ser Pro Ser Leu Leu Ala Phe Gln Ser Leu Gly Arg Asn
      35             40             45

Leu Ser Xaa Leu Pro Pro Leu Ser Leu Ala His Arg His Pro Ala Cys
      50             55             60

Ile Ser Gln Glu Glu Val Glu Gly Thr Ser Leu Phe Pro Arg Asn Pro
      65             70             75             80

Leu Tyr Pro His Pro Val Leu Cys Ser Ser Pro Arg Leu Leu Gly Leu
      85             90             95

Arg Leu Leu Thr Ser Arg Arg Leu Arg Leu Val Cys Val Cys Leu Phe
      100            105            110

Ala His Leu Trp Leu Ile Pro Arg Glu Pro Gly His Leu Leu Pro Asp
      115            120            125

Ala His Pro Cys Gln Ser Phe Leu His Ser Pro Ser Gly Arg Trp Asp

```



## 4532

130                      135                      140  
 Val Arg Gln Pro Thr Leu Glu Asn Pro Glu Asn Arg Glu Gln Gly Phe  
 145                      150                      155                      160  
 Ala Leu His Asn Ser Thr Pro Gln Ile Leu Ser Pro Gly His Arg Arg  
                          165                      170                      175  
 Pro Thr Gly Gln Asp Pro Lys Ile Trp Gly Lys Glu Val Leu Arg Thr  
                          180                      185                      190  
 Leu Arg Tyr Pro  
                          195

&lt;210&gt; 5028

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5028

Met Phe Leu Asp Gly Gly Leu Pro Ser Ser Lys Leu Leu Pro Ile Cys  
   1                          5                          10                          15  
 Thr Ser Val Leu Gly Gln Gly Lys Xaa Lys Ala Arg Ser Cys Lys Ser  
                           20                          25                          30  
 His Ser Ser Gly Ser Gln Phe His Pro Gln Phe Lys Glu Leu Ser Arg  
                           35                          40                          45  
 Gln Arg Gln Arg Leu Tyr Ser Thr His Val Gln Leu Lys Ala Gly Glu  
                           50                          55                          60  
 Ala Lys Pro Gly Gln Arg Lys Gly Lys Gly Cys Val  
   65                          70                          75

&lt;210&gt; 5029

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

## 4533

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (87)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5029

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Ile | Ala | Pro | Asn | Gly | Gln | Ser | Leu | Val | Lys | Gln | Leu | His | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gln | Leu | Asp | Leu | Pro | Tyr | Leu | Pro | Leu | Lys | Arg | Pro | Lys | Trp | Thr |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Xaa | Ser | Ser | Gln | Leu | Leu | Gly | Tyr | Phe | Thr | Leu | Ala | Leu | Tyr | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ala | Pro | Ser | Lys | Leu | Lys | Gly | Asp | Leu | Asn | Tyr | Leu | Arg | Leu | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Gly | Pro | Asp | Phe | Gln | Gln | His | Glu | Ala | Gly | Leu | Ile | Gly | Ala | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Pro | Ile | Leu | Thr | Xaa | Ser | Ser | Ala | Glu | Leu | Ala | Gln | Gln | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Met | Leu | Asn | Gly | Cys | Thr | Trp | Leu | Pro | Val | Ser | Trp | Ala | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Gly | Gly | Leu | His | Thr | Val | Val | Asp | Ser | Thr | Thr | Leu | Ser | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |
|-----|-----|
| Pro | Leu |
|     | 130 |

&lt;210&gt; 5030

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5030

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | His | Pro | Pro | Arg | Asn | Phe | Leu | Asp | Ala | Val | Arg | Ala | Arg | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Tyr | Leu | Glu | Leu | Lys | Lys | Leu | His | Ala | Ser | Val | Lys | Leu | Leu | Thr |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Lys | Asn | Lys | Leu | Arg | Gly | Pro | Lys | Ser | Arg | Asn | Val | Phe | His |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4534

35                      40                      45  
 Ile Ala Ser Gln Lys Asn Phe Lys Ala Lys Asn Lys Ala Lys Pro Val  
 50                      55                      60  
 Thr Thr Asn Leu Lys Lys Ile Asn Ile Met Asn Glu Glu Lys Val Asn  
 65                      70                      75                      80  
 Arg Val Asn Lys Ala Phe Val Asn Val Gln Lys Glu Leu Ala His Phe  
 85                      90                      95  
 Ala Lys Ser Ile Ser Leu Glu Pro Leu Gln Lys Glu Leu Ile Pro Gln  
 100                      105                      110  
 Gln Arg His Glu Ser Lys Pro Val Asn Val Asp Glu Ala Thr Arg Leu  
 115                      120                      125  
 Met Ala Leu Leu  
 130

<210> 5031  
 <211> 68  
 <212> PRT  
 <213> Homo sapiens

<400> 5031  
 Arg Glu Cys Val Cys Thr Phe Ser Leu Tyr Lys Gly Gln Gly Val Gly  
 1                      5                      10                      15  
 Gln Ile His His Arg Leu Ile Tyr Ile Phe Cys Cys Asp Phe Phe Gln  
 20                      25                      30  
 Leu Tyr Asn Lys Cys Gln Leu Ile Val His Gly Thr Ile Tyr Phe Ser  
 35                      40                      45  
 Thr Gln Phe Ile Val Leu Ser Arg Glu Arg Phe Ile Tyr Phe His Tyr  
 50                      55                      60  
 Leu Ala Leu Ser  
 65

<210> 5032  
 <211> 142  
 <212> PRT  
 <213> Homo sapiens  
 <220>

## 4535

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (124)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5032

Pro Thr Arg Pro Ala Ser Xaa Gly Cys Gly Leu Pro Leu Ser Leu Leu  
 1 5 10 15

Arg Ala Val Thr Pro Val Pro Ala Ala Ile Arg Pro Gly Ala Pro Asp  
 20 25 30

Glu Ser Met Arg Gly Arg Ala Arg Gly Val Val Phe Pro Arg Thr Pro  
 35 40 45

Gly Gly Leu Pro Arg Pro Val Leu Cys Thr Ser Ser Pro Thr Lys Gly  
 50 55 60

Glu Thr Glu Ala Pro Arg Gly Val Gly Arg Ala Gly Trp Thr Ser Gly  
 65 70 75 80

Pro Ala Ala Gly Ala Val Val Arg Pro Leu Cys Arg Gly Gly Pro Leu  
 85 90 95

Gly Phe Arg Val Ser Ser Gly Lys Arg Leu Ala Gly Leu Val Gly Cys  
 100 105 110

Ala Ala Ile Leu Glu Thr Asp Asp Ser Ser Pro Xaa Asp Gly Phe Ala  
 115 120 125

Gly Ser Ala Pro Ala Ser Ala Pro Ile Phe Pro Ala Ala Pro  
 130 135 140

&lt;210&gt; 5033

&lt;211&gt; 255

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (242)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4536

&lt;222&gt; (248)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (249)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5033

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Met | Ser | Ala | Val | Leu | Leu | Leu | Ala | Leu | Leu | Gly | Phe | Ile | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Pro | Gly | Val | Gln | Ala | Leu | Leu | Cys | Gln | Phe | Gly | Thr | Val | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Val | Trp | Lys | Val | Ser | Asp | Leu | Pro | Arg | Gln | Trp | Thr | Pro | Lys | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Cys | Asp | Ser | Gly | Leu | Gly | Cys | Gln | Asp | Thr | Leu | Met | Leu | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Gly | Pro | Gln | Val | Ser | Leu | Val | Leu | Ser | Lys | Gly | Cys | Thr | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Lys | Asp | Gln | Glu | Pro | Arg | Val | Thr | Glu | His | Arg | Met | Gly | Pro | Gly |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Leu | Ile | Ser | Tyr | Thr | Phe | Val | Cys | Arg | Gln | Glu | Asp | Phe | Cys |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Asn | Leu | Val | Asn | Ser | Leu | Pro | Leu | Trp | Ala | Pro | Gln | Pro | Pro | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Pro | Gly | Ser | Leu | Arg | Cys | Pro | Val | Cys | Leu | Ser | Met | Glu | Gly | Cys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Gly | Thr | Thr | Glu | Glu | Ile | Cys | Pro | Lys | Gly | Thr | Thr | His | Cys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Asp | Gly | Leu | Leu | Arg | Leu | Arg | Gly | Gly | Gly | Ile | Phe | Ser | Asn | Leu |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Gln | Gly | Cys | Met | Pro | Gln | Pro | Gly | Cys | Asn | Leu | Leu | Asn | Gly |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gln | Glu | Ile | Gly | Pro | Val | Gly | Met | Thr | Glu | Asn | Cys | Asn | Arg | Lys |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Phe | Leu | Thr | Cys | His | Arg | Gly | Thr | Thr | Ile | Met | Thr | His | Gly | Asn |
|     |     | 210 |     |     |     |     | 215 |     |     |     | 220 |     |     |     |     |

## 4537

Leu Ala Gln Glu Pro Thr Asp Trp Thr Thr Ser Asn Tyr Arg Asp Val  
 225 230 235 240

Arg Xaa Gly Ala Gly Val Ser Xaa Xaa Ala Ala Ala Pro Arg Cys  
 245 250 255

<210> 5034

<211> 78

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (14)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (28)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5034

His Glu Gly Arg Arg Lys Lys Trp Met Leu Glu Ser Cys Xaa Met Ser  
 1 5 10 15

Leu Trp Ile Ala Gln Lys Tyr Gln Leu Trp Leu Xaa Pro His Leu Ala  
 20 25 30

Phe Val Ser Met Lys Lys Pro Gly Thr Ile Ser Thr Thr Ile Ser Asp  
 35 40 45

His His Gln Pro Gln Ile Leu Gly Asn Leu Leu Glu Phe Phe Leu Asn  
 50 55 60

Val Leu Asn Ser Cys Trp Val Pro Gly Arg Phe Gln Arg Lys  
 65 70 75

<210> 5035

<211> 38

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (17)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4538

<220>  
<221> SITE  
<222> (31)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (32)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5035  
Phe Gly Ala Ser Ser Leu Ser Ser Cys Arg Pro Ile Thr Ile Val Pro  
1 5 10 15  
Xaa Gly Lys Lys Trp Ser Pro Ala Pro Ser Pro Val Ala Leu Xaa Xaa  
20 25 30  
Thr Gly Asn Pro Phe Gly  
35

<210> 5036  
<211> 43  
<212> PRT  
<213> Homo sapiens

<400> 5036  
Ser Arg Pro Phe Glu Glu Ile Tyr Glu Trp Asp Ile Lys Gln Phe Ser  
1 5 10 15  
Val Leu Gln Val Phe Phe Phe Phe Ser Lys Leu Phe Ala Val Ser Asn  
20 25 30  
Cys Asn Gln Tyr Leu Leu Leu Ser Ile Cys Leu  
35 40

<210> 5037  
<211> 89  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (64)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5037  
Ala Gly Phe Ser Val Ile Ala Thr Phe Ala Tyr Phe Phe Pro Tyr Phe

```

1           5           10           15
Pro Cys Leu Leu Met Leu Asn Ser Met Asn Leu Leu Ser Asp Ala Val
      20           25           30

Leu Asp Cys Pro Cys Cys Ile Ser Ile Ile Ser Leu Phe Ser Phe Ser
      35           40           45

Leu Tyr Tyr Tyr Asn Cys Ser Phe Tyr Met Lys Ala Arg Lys Leu Xaa
      50           55           60

Leu Glu Glu His Leu Ser Ala Thr Cys Gln Phe Cys Val Ser Val Leu
      65           70           75           80

Tyr Val Cys Val Asn Phe Pro Leu Lys
      85

<210> 5038
<211> 176
<212> PRT
<213> Homo sapiens

<400> 5038
Gly Pro Arg Gln Gly Asp His Leu Arg Ser Gly Val Ser Thr Lys Asn
  1           5           10           15

Thr Lys Ile Arg Gln Val Trp Trp Trp Ala Pro Leu Arg Arg Leu Arg
      20           25           30

Gln Glu Asn His Leu Asn Pro Gly Gly Arg Gly Cys Ser Glu Pro Asp
      35           40           45

His Ala Ala Ala Leu Gln Pro Gly Arg Ser Pro Cys Val Leu Leu Gly
      50           55           60

Ala Gly Ala Val Thr Tyr Pro Leu Ser Phe Ser Leu Ala Ile Ser Val
      65           70           75           80

Val Ser Tyr Glu Ala Glu Ile Gly Lys Gly Tyr Met Gln Val Ser Gln
      85           90           95

Trp Thr Trp Pro Met Leu Gln Ala Pro Ser Ser Gln Val Gln Gln Cys
      100          105          110

Tyr His Leu Leu Leu Leu Gly Gly Gln Thr Arg His Pro His His Glu
      115          120          125

Gly Ala Ala Gly Thr Met Asn Tyr Val Asn Asn Pro Ser Leu Tyr Tyr
      130          135          140

```



## 4540

Arg Lys Gly Cys Ser His Met Arg Ile Gln Ser Thr Gln Ala Pro Trp  
 145 150 155 160

Pro Cys Ser Pro Leu Gln Pro Gln Gly Ser Gly Ser Pro Ile Trp Arg  
 165 170 175

<210> 5039

<211> 274

<212> PRT

<213> Homo sapiens

<400> 5039

Arg Gly Cys Gly Ser Cys Gly Tyr Lys Pro Ser Ala Gly Pro Ala Trp  
 1 5 10 15

Arg Pro Arg Pro Pro Pro Ala Val Ser Pro Leu Arg His Pro Glu Pro  
 20 25 30

Ala Lys Val Leu Ser Phe Ser Ser Cys Pro Leu Pro Ala Leu Gly Arg  
 35 40 45

Thr Gly Pro Ser Arg Ala Ala Arg Ala Gln Ser Leu Thr Met Ala Ser  
 50 55 60

Leu Phe Lys Lys Lys Thr Val Asp Asp Val Ile Lys Glu Gln Asn Arg  
 65 70 75 80

Glu Leu Arg Gly Thr Gln Arg Ala Ile Ile Arg Asp Arg Ala Ala Leu  
 85 90 95

Glu Lys Gln Glu Lys Gln Leu Glu Leu Glu Ile Lys Lys Met Ala Lys  
 100 105 110

Ile Gly Asn Lys Glu Ala Cys Lys Val Leu Ala Lys Gln Leu Val His  
 115 120 125

Leu Arg Lys Gln Lys Thr Arg Thr Phe Ala Val Ser Ser Lys Val Thr  
 130 135 140

Ser Met Ser Thr Gln Thr Lys Val Met Asn Ser Gln Met Lys Met Ala  
 145 150 155 160

Gly Ala Met Ser Thr Thr Ala Lys Thr Met Gln Ala Val Asn Lys Lys  
 165 170 175

## 4541

Met Asp Pro Gln Lys Thr Leu Gln Thr Met Gln Asn Phe Gln Lys Glu  
                   180                  185                  190

Asn Met Lys Met Glu Met Thr Glu Glu Met Ile Asn Asp Thr Leu Asp  
                   195                  200                  205

Asp Ile Phe Asp Gly Ser Asp Asp Glu Glu Glu Ser Gln Asp Ile Val  
                   210                  215                  220

Asn Gln Val Leu Asp Glu Ile Gly Ile Glu Ile Ser Gly Lys Met Ala  
                   225                  230                  235                  240

Lys Ala Pro Ser Ala Ala Arg Ser Leu Pro Ser Ala Ser Thr Ser Lys  
                   245                  250                  255

Ala Thr Ile Ser Asp Glu Glu Ile Glu Arg Gln Leu Lys Ala Leu Gly  
                   260                  265                  270

Val Asp

&lt;210&gt; 5040

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5040

Thr Leu Lys Ile Glu Val Pro His Asp Pro Ala Ile Pro Leu Leu Asp  
       1                  5                  10                  15

Ile Tyr Pro Arg Asn Lys Lys  
                   20

&lt;210&gt; 5041

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5041

Ala Arg Phe Ile Lys Leu Ile Phe Phe Ile Leu Val Val Lys Ser Ser  
       1                  5                  10                  15

## 4542

Leu Ile Ala Phe Cys Gln Leu Asp Phe Xaa Val Cys Val Ile Phe Lys  
                   20                  25                  30

Gly Arg Met Thr Gly Gln Ile Ser Asn Lys Lys Cys Ile Glu Leu Glu  
                   35                  40                  45

Asn Ile Val Val Pro Ser Tyr Pro Trp Asp Ile Arg Ser Lys Thr Pro  
                   50                  55                  60

Ser Glu Arg Leu Lys Pro Trp Ile Val  
                   65                  70

<210> 5042

<211> 37

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (33)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5042

Ala Asp Val Glu Ser Pro Glu Leu Ile Ser Asn Phe Leu Pro Phe Pro  
                   1                  5                  10                  15

Phe Pro Ser Pro Ser Leu Pro Phe Pro Phe Ser Pro Leu Pro Ser Pro  
                   20                  25                  30

Xaa Phe Pro Ser Pro  
                   35

<210> 5043

<211> 87

<212> PRT

<213> Homo sapiens

<400> 5043

Glu Gly Arg Leu Arg Gln Gly Arg Val Arg Glu His Cys Arg Gly Glu  
                   1                  5                  10                  15

Glu Gly Ile His Phe Leu Val Ile Ser Phe His Ser Lys Arg Val Ser  
                   20                  25                  30

Gln Asn Arg Trp Pro Gly Thr Gly Glu Leu Gly Arg Ala Arg Arg Glu  
                   35                  40                  45

## 4543

Ile Ser Ala Cys Val Arg Lys Asp Gly Arg Ala Gly Leu Glu Pro Leu  
 50 55 60

Leu Asp Tyr Leu Gln Ser Phe Cys Ser Thr Leu Lys Val Asn Gln Cys  
 65 70 75 80

Leu Gln Thr Phe Pro Asp Thr  
 85

<210> 5044

<211> 124

<212> PRT

<213> Homo sapiens

<400> 5044

Ile Asn Thr Ile Ile Phe Ile Trp Lys Phe Tyr Arg Arg Ala Ile Ser  
 1 5 10 15

Val Tyr Val Ile Thr Pro Asp Phe Leu Lys Leu Leu Leu Val Asp Asn  
 20 25 30

Arg Gln Val Leu Ser Ser Val Pro Leu Arg Val Val Pro Gly Leu Pro  
 35 40 45

Ala Val Glu Leu Thr Gly Gly Ile Leu Gln Phe Cys Asp Pro Arg Met  
 50 55 60

Arg Pro Arg Arg Ser Val Arg Ser Ala Gly Gly Gly Ala Trp Glu Ala  
 65 70 75 80

Val Phe Val Met Asn Ser Gly Val Phe Cys Pro Leu Lys Cys Ile Phe  
 85 90 95

Val His Pro Ile Arg Leu Lys Glu Arg Lys Ser Ile Ser Asn Glu Cys  
 100 105 110

Lys Leu Phe Leu Arg Lys Lys Cys Ile Arg Leu Leu  
 115 120

<210> 5045

<211> 139

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (121)

## 4544

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (139)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5045

Asp Gln Gly Gly Glu Trp Lys His Gly Arg Ile Ile Leu Pro Ser Tyr  
1 5 10 15

Asp Met Glu Tyr Gln Ile Val Phe Glu Gly Val Ile Gly Lys Gly Arg  
20 25 30

Ser Gly Glu Ile Ala Ile Asp Asp Ile Arg Ile Ser Thr Asp Val Pro  
35 40 45

Leu Glu Asn Cys Met Glu Pro Ile Ser Ala Phe Ala Gly Gly Thr Leu  
50 55 60

Leu Pro Gly Thr Glu Pro Thr Val Asp Thr Val Pro Met Gln Pro Ile  
65 70 75 80

Pro Ala Tyr Trp Tyr Tyr Val Met Ala Ala Gly Gly Ala Val Leu Val  
85 90 95

Leu Val Ser Val Ala Leu Ala Leu Val Leu His Tyr His Arg Phe Arg  
100 105 110

Tyr Ala Ala Lys Lys Thr Asp His Xaa Ile Thr Tyr Lys Thr Phe His  
115 120 125

Tyr Thr Asn Gly Ala Pro Leu Ala Val Glu Xaa  
130 135

<210> 5046

<211> 201

<212> PRT

<213> Homo sapiens

<400> 5046

Ala Leu Ile Met Ser Phe Ile Phe Glu Trp Ile Tyr Asn Gly Phe Ser  
1 5 10 15

Ser Val Leu Gln Phe Leu Gly Leu Tyr Lys Lys Ser Gly Lys Leu Val  
20 25 30

Phe Leu Gly Leu Asp Asn Ala Gly Lys Thr Thr Leu Leu His Met Leu  
35 40 45

## 4545

Lys Asp Asp Arg Leu Gly Gln His Val Pro Thr Leu His Pro Thr Ser  
 50 55 60  
 Glu Glu Leu Thr Ile Ala Gly Met Thr Phe Thr Thr Phe Asp Leu Gly  
 65 70 75 80  
 Gly His Glu Gln Ala Arg Arg Val Trp Lys Asn Tyr Leu Pro Ala Ile  
 85 90 95  
 Asn Gly Ile Val Phe Leu Val Asp Cys Ala Asp His Ser Arg Leu Val  
 100 105 110  
 Glu Ser Lys Val Glu Leu Asn Ala Leu Met Thr Asp Glu Thr Ile Ser  
 115 120 125  
 Asn Val Pro Ile Leu Ile Leu Gly Asn Lys Ile Asp Arg Thr Asp Ala  
 130 135 140  
 Ile Ser Glu Glu Lys Leu Arg Glu Ile Phe Gly Leu Tyr Gly Gln Thr  
 145 150 155 160  
 Thr Gly Lys Gly Asn Val Thr Leu Lys Glu Leu Asn Ala Arg Pro Met  
 165 170 175  
 Glu Val Phe Met Cys Ser Val Leu Lys Arg Gln Gly Tyr Gly Glu Gly  
 180 185 190  
 Phe Arg Trp Leu Ser Gln Tyr Ile Asp  
 195 200

&lt;210&gt; 5047

&lt;211&gt; 304

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (206)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5047

Lys Glu Gly Ile Leu Phe Val Thr Tyr Pro Asp Gly Arg Pro Thr Gly  
 1 5 10 15  
 Asp Ala Phe Val Leu Phe Ala Cys Glu Glu Tyr Ala Gln Asn Ala Leu  
 20 25 30  
 Arg Lys His Lys Asp Leu Leu Gly Lys Arg Tyr Ile Glu Leu Phe Arg

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |     |  |
| Ser | Thr | Ala | Ala | Glu | Val | Gln | Gln | Val | Leu | Asn | Arg | Phe | Ser | Ser | Ala |  |
| 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |  |
| Pro | Leu | Ile | Pro | Leu | Pro | Thr | Pro | Pro | Ile | Ile | Pro | Val | Leu | Pro | Gln |  |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |  |
| Gln | Phe | Val | Pro | Pro | Thr | Asn | Val | Arg | Asp | Cys | Ile | Arg | Leu | Arg | Gly |  |
| 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |     |     |     |  |
| Leu | Pro | Tyr | Ala | Ala | Thr | Ile | Glu | Asp | Ile | Leu | Asp | Phe | Leu | Gly | Glu |  |
| 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |     |     |  |
| Phe | Ala | Thr | Asp | Ile | Arg | Thr | His | Gly | Val | His | Met | Val | Leu | Asn | His |  |
| 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |     |  |
| Gln | Gly | Arg | Pro | Ser | Gly | Asp | Ala | Phe | Ile | Gln | Met | Lys | Ser | Ala | Asp |  |
| 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |  |
| Arg | Ala | Phe | Met | Ala | Ala | Gln | Lys | Cys | His | Lys | Lys | Asn | Met | Lys | Asp |  |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |  |
| Arg | Tyr | Val | Glu | Val | Phe | Gln | Cys | Ser | Ala | Glu | Glu | Met | Asn | Phe | Val |  |
| 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     |     |  |
| Leu | Met | Gly | Gly | Thr | Leu | Asn | Arg | Asn | Gly | Leu | Ser | Pro | Pro | Pro | Cys |  |
| 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     |     |  |
| Leu | Ser | Pro | Pro | Ser | Tyr | Thr | Phe | Pro | Ala | Pro | Ala | Ala | Xaa | Ile | Pro |  |
| 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |     |  |
| Thr | Glu | Ala | Ala | Ile | Tyr | Gln | Pro | Ser | Val | Ile | Leu | Asn | Pro | Arg | Ala |  |
| 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |  |
| Leu | Gln | Pro | Ser | Thr | Ala | Tyr | Tyr | Pro | Ala | Gly | Thr | Gln | Leu | Phe | Met |  |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |  |
| Asn | Tyr | Thr | Ala | Tyr | Tyr | Pro | Ser | Pro | Pro | Gly | Ser | Pro | Asn | Ser | Leu |  |
| 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |     |     |     |  |
| Gly | Tyr | Phe | Pro | Thr | Ala | Ala | Asn | Leu | Ser | Gly | Val | Pro | Pro | Gln | Pro |  |
| 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |     |     |     |  |
| Gly | Thr | Val | Val | Arg | Met | Gln | Gly | Leu | Ala | Tyr | Asn | Thr | Gly | Val | Lys |  |
| 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |     |  |
| Glu | Ile | Leu | Asn | Phe | Phe | Gln | Gly | Tyr | Gln | Cys | Leu | Lys | Asp | Val | Trp |  |
| 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |     |  |

4547

&lt;210&gt; 5048

&lt;211&gt; 254

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5048

```

Trp Cys Ile Phe Asp Tyr Met Ala Val Tyr Arg Met Cys Cys Pro Tyr
 1              5              10              15

Thr Arg Arg Ala Ser Lys Ser Ser Arg Pro Met Tyr Gly Ala Val Thr
      20              25              30

Ser Phe Leu His Ser Leu Ile Ile Gln Asn Glu Pro Arg Phe Ala Met
      35              40              45

Phe Gly Pro Gly Leu Glu Glu Leu Asn Thr Ser Leu Val Leu Ser Leu
      50              55              60

Met Ser Ser Glu Glu Leu Cys Pro Thr Ala Gly Leu Pro Gln Arg Gln
      65              70              75              80

Ile Asp Gly Ile Gly Ser Gly Val Asn Phe Gln Leu Asn Asn Gln His
      85              90              95

Lys Phe Asn Ile Leu Ile Leu Tyr Ser Thr Thr Arg Lys Glu Arg Asp
      100              105              110

Arg Ala Arg Glu Glu His Thr Ser Ala Val Asn Lys Met Phe Ser Arg
      115              120              125

His Asn Glu Gly Asp Asp Gln Gln Gly Ser Arg Tyr Ser Val Ile Pro
      130              135              140

Gln Ile Gln Lys Val Cys Glu Val Val Asp Gly Phe Ile Tyr Val Ala
      145              150              155              160

Asn Ala Glu Ala His Lys Arg His Glu Trp Gln Asp Glu Phe Ser His
      165              170              175

Ile Met Ala Met Thr Asp Pro Ala Phe Gly Ser Ser Gly Arg Pro Leu
      180              185              190

Leu Val Leu Ser Cys Ile Ser Gln Gly Asp Val Lys Arg Met Pro Cys
      195              200              205

Phe Tyr Leu Ala His Glu Leu His Leu Asn Leu Leu Asn His Pro Trp
      210              215              220

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## 4548

Leu Val Gln Asp Thr Glu Ala Glu Thr Leu Thr Gly Phe Leu Asn Gly  
 225 230 235 240

Ile Glu Trp Ile Leu Glu Glu Val Glu Ser Lys Arg Ala Arg  
 245 250

<210> 5049

<211> 45

<212> PRT

<213> Homo sapiens

<400> 5049

Phe Leu Ile Val His Lys Pro Leu Thr Lys Glu Ser Glu Ile Ser Pro  
 1 5 10 15

Ser Val Lys Arg Lys Gln Ala Met Lys Cys Tyr Ile Cys Arg Leu Lys  
 20 25 30

Ser Lys Leu Val Cys Phe Leu Lys Asn Leu Asn Gln Asp  
 35 40 45

<210> 5050

<211> 94

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (64)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5050

Ser Cys Val Ser Ala Val Asp Thr Asn Ile Lys Cys Leu Val His Leu  
 1 5 10 15

Lys Ser Leu Ser Leu Pro Tyr Met Gly Glu Thr Gln Ser Pro Ser Leu  
 20 25 30

Cys Trp Lys Tyr His Gln Thr Asp Cys Lys Cys Ala Ala Val Ala Asp  
 35 40 45

Ile Leu Val Trp Trp Cys Ala Ala Ile Ser Ala Leu His Leu Pro Xaa  
 50 55 60

Trp Leu Pro Tyr Ser Cys Val Pro Ile Phe Ala Ser Met Leu Gly Val  
 65 70 75 80

4549

Pro His Leu Leu His Phe Pro Ala Cys Asn Gln Glu Leu Thr  
85 90

```
<210> 5051
<211> 200
<212> PRT
<213> Homo sapiens
```

```
<220>
<221> SITE
<222> (198)
<223> Xaa equals any of the naturally occurring L-amino acids
```

```
<220>
<221> SITE
<222> (200)
<223> Xaa equals any of the naturally occurring L-amino acids
```

<400> 5051  
Val Gly Pro Gly Ala Ala Trp Arg Arg Pro His Ser Gly Ile Met Ala  
1 5 10 15

Gln Val Ala Met Ser Thr Leu Pro Val Glu Asp Glu Glu Ser Ser Glu  
20 25 30

Ser Arg Met Val Val Thr Phe Leu Met Ser Ala Leu Glu Ser Met Cys  
35 40 45

Lys Glu Leu Ala Lys Ser Lys Ala Glu Val Ala Cys Ile Ala Val Tyr  
50 55 60

Glu Thr Asp Val Phe Val Val Gly Thr Glu Arg Gly Arg Ala Phe Val  
65 70 75 80

Asn Thr Arg Lys Asp Phe Gln Lys Asp Phe Val Lys Tyr Cys Val Glu  
85 90 95

Glu Glu Glu Lys Ala Ala Glu Met His Lys Met Lys Ser Thr Thr Gln  
100 105 110

Ala Asn Arg Met Ser Val Asp Ala Val Glu Ile Glu Thr Leu Arg Lys  
115 120 125

Thr Val Glu Asp Tyr Phe Cys Phe Cys Tyr Gly Lys Ala Leu Gly Lys  
130 135 140

Ser Thr Val Val Pro Val Pro Tyr Glu Lys Met Leu Arg Asp Gln Ser  
145 150 155 160

## 4550

Ala Val Val Val Gln Gly Leu Pro Glu Gly Val Ala Phe Lys His Pro  
                   165                  170                  175

Glu Asn Tyr Asp Leu Ala Thr Leu Lys Trp Ile Leu Glu Asn Lys Ala  
                   180                  185                  190

Gly Ile Ser Phe Ile Xaa Lys Xaa  
                   195                  200

<210> 5052

<211> 179

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (112)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (143)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (155)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (160)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5052

Arg Glu Ile Glu Arg Lys Arg Gln Arg Glu Glu Glu Arg Arg Lys Trp  
   1                  5                  10                  15

Lys Glu Glu Glu Lys Arg Lys Arg Lys Asp Ile Glu Lys Leu Lys Lys  
                   20                  25                  30

Ile Asp Arg Ile Pro Glu Arg Asp Lys Leu Lys Asp Glu Pro Lys Ile  
                   35                  40                  45

Lys Leu Leu Lys Lys Pro Glu Lys Gly Asp Glu Lys Glu Leu Asp Lys  
                   50                  55                  60

Arg Glu Lys Ala Lys Lys Leu Asp Lys Glu Asn Leu Ser Asp Glu Arg

## 4551

| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ala | Ser | Gly | Gln | Ser | Cys | Thr | Leu | Pro | Lys | Arg | Ser | Asp | Ser | Glu | Leu |  |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     | 95  |     |     |     |  |
| Lys | Asp | Glu | Lys | Pro | Lys | Arg | Pro | Glu | Asp | Glu | Ser | Gly | Arg | Asp | Xaa |  |
|     |     |     |     | 100 |     |     |     | 105 |     |     |     | 110 |     |     |     |  |
| Arg | Glu | Arg | Glu | Arg | Glu | Tyr | Glu | Arg | Asp | Gln | Glu | Arg | Ile | Leu | Arg |  |
|     |     |     |     | 115 |     |     |     | 120 |     |     |     | 125 |     |     |     |  |
| Glu | Arg | Glu | Arg | Leu | Lys | Arg | Gln | Glu | Glu | Glu | Arg | Arg | Arg | Xaa | Arg |  |
|     |     |     |     | 130 |     |     |     | 135 |     |     |     | 140 |     |     |     |  |
| Ser | Ala | Met | Arg | Lys | Arg | Arg | Leu | Leu | Arg | Xaa | Lys | Lys | Lys | Lys | Xaa |  |
| 145 |     |     |     | 150 |     |     |     | 155 |     |     |     | 160 |     |     |     |  |
| Lys | Lys | Arg | Lys | Thr | His | Phe | Gly | Ile | Lys | Glu | Arg | Arg | Leu | Lys | Val |  |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     | 175 |     |     |     |  |
| Gln | Asn | Gln |     |     |     |     |     |     |     |     |     |     |     |     |     |  |

<210> 5053

<211> 73

<212> PRT

<213> Homo sapiens

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

<222> (56)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5053

[illegible]

## 4552

<210> 5054

<211> 60

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (13)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5054

Pro Cys Ala Ile Ile Phe Phe His His Phe Ser Gly Xaa Leu Glu Gly  
1 5 10 15

Gly Gly Asp Pro Gly Asp Leu Ser Thr Leu Phe Ser Gln Lys Ala Gly  
20 25 30

Trp Phe Phe Ser Leu Phe Ser Cys Asp Ser Tyr Leu Glu Ser Gly Leu  
35 40 45

Asn Val Asn Ile Leu Val Leu Val Val Gln Leu Arg  
50 55 60

<210> 5055

<211> 72

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (23)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (24)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

4553

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (61)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (68)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (70)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5055

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Val | Glu | Lys | Ser | Leu | Met | Thr | Leu | Lys | Ile | Ser | Ala | Trp | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Lys | Ile | Gly | Asn | Xaa | Xaa | Xaa | Gly | Xaa | Arg | Phe | Gly | Lys | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Glu | Arg | Ile | Met | Lys | Phe | Asp | Phe | Tyr | Ile | Glu | Met | Lys | Gly | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gln | Ile | Trp | Lys | Ser | Phe | Gly | Leu | Asn | Asn | Xaa | Xaa | Ile | Phe | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Asn | Xaa | Gly | Xaa | Lys | Pro |
| 65  |     |     |     |     | 70  |     |     |

&lt;210&gt; 5056

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5056

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Cys | Phe | Glu | Thr | Val | Val | Asp | Gly | Tyr | Glu | Glu | Leu | Leu | Phe |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4554

1                      5                      10                      15  
 Leu Leu Pro Cys Arg Thr Pro Glu Ser Lys Met Ile His Gln Gln Leu  
                     20                      25                      30  
 Tyr Trp Ser His Pro Arg Lys Val Ser Gln Gly Ser Cys Tyr Xaa Val  
                     35                      40                      45  
 Cys

&lt;210&gt; 5057

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5057

Arg Ile Gln Glu Tyr Phe Leu Leu Gly Trp Ala Leu Asn Lys Ala Lys  
 1                      5                      10                      15  
 Asn Cys Arg Asn Gln Ser Arg Lys Ser Pro Ala His Leu Trp Pro Leu  
                     20                      25                      30  
 Pro Ser Ser Arg Pro Pro Pro Cys Arg Lys Asn Leu Ala Phe Gly Leu  
                     35                      40                      45  
 Ser Leu Ser His Arg Gly His Leu Leu Phe Pro Ser Asp Ile Gln Pro  
                     50                      55                      60  
 Tyr Arg Arg Ser Leu Asp Ser Asp Pro Ser Val Gln Ala Gly Trp Lys  
 65                      70                      75                      80  
 Gly Pro Ser Thr Leu Pro Gly Arg Ser Glu Thr Asn Cys Phe Arg Glu  
                     85                      90                      95  
 Ser Asp Gly Leu Pro Lys Thr Cys  
 100

&lt;210&gt; 5058

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (37)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4555

&lt;400&gt; 5058

```

Pro Thr Arg Pro Arg Thr Arg Gly Leu Lys Met Pro Leu Thr Phe Ile
 1             5             10             15

Leu Leu Pro Ser Gly Lys Gly Asn Leu Val Phe Ser Ile Thr Ser Thr
          20             25             30

Lys Ile Leu Leu Xaa Ser Thr His Tyr Pro Ile Pro Lys Pro Phe Ser
      35             40             45

His Phe Lys Thr Phe Val Thr Glu Val Pro Asn Pro Ser Gln Phe His
    50             55             60

Asn Leu His
 65

```

&lt;210&gt; 5059

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (61)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5059

```

Thr Lys Leu His Phe Gln Gly Gln Gly Leu Gly Asn Xaa Leu Ile Val
 1             5             10             15

Lys Ser Cys Asn Thr Ser Val Gln Val Asn Ile Ser Gly Pro Cys Phe
          20             25             30

Pro Ser Gln Cys Met His Glu Leu Phe Phe Met His His Trp Gly Ala
      35             40             45

Gln Ser Trp Xaa Asn Leu Pro Val Gly Ile Leu Gly Xaa Thr Trp Ala
    50             55             60

```



## 4556

Cys Leu  
65

<210> 5060  
<211> 47  
<212> PRT  
<213> Homo sapiens

<400> 5060  
Lys Cys Lys Cys Ala Gly Arg Lys Gly Thr Asp Asp Ser Val Thr Leu  
1 5 10 15  
Gln Leu Gln Lys Leu Arg Val Gly Asp Tyr Leu Asp Ile Ala Ile Thr  
20 25 30  
Pro Leu Asn Gln Val Pro Pro Pro Ser Gly His Met Arg Ser Tyr  
35 40 45

<210> 5061  
<211> 113  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (33)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5061  
Phe Gly Thr Ser Gly Thr Ser Cys Cys Leu Gly Trp Thr Trp Phe Cys  
1 5 10 15  
Leu Leu Arg Pro Leu Phe Ala Leu Ser Phe His Phe Leu Gln Arg Ala  
20 25 30  
Xaa Arg Met Ala His Lys Gln Ile Tyr Tyr Ser Asp Lys Tyr Phe Asp  
35 40 45  
Glu His Tyr Glu Tyr Arg His Val Met Leu Pro Arg Glu Leu Ser Lys  
50 55 60  
Gln Val Pro Lys Thr His Leu Met Ser Glu Glu Glu Trp Arg Arg Leu  
65 70 75 80  
Gly Val Gln Gln Ser Leu Gly Trp Val His Tyr Met Ile His Glu Pro  
85 90 95

## 4557

Glu Pro His Ile Leu Leu Phe Arg Arg Pro Leu Pro Lys Asp Gln Gln  
 100 105 110

Lys

<210> 5062

<211> 287

<212> PRT

<213> Homo sapiens

<400> 5062

Ser Gly Ser Ala Phe Leu Arg Cys Pro Pro Pro Pro Val Arg Arg Ser  
 1 5 10 15

Glu Lys Pro Asn Trp Asp Tyr His Ala Glu Ile Gln Ala Phe Gly His  
 20 25 30

Arg Leu Gln Glu Asn Phe Ser Leu Asp Leu Leu Lys Thr Ala Phe Val  
 35 40 45

Asn Ser Cys Tyr Ile Lys Ser Glu Glu Ala Lys Arg Gln Gln Leu Gly  
 50 55 60

Ile Glu Lys Glu Ala Val Leu Leu Asn Leu Lys Ser Asn Gln Glu Leu  
 65 70 75 80

Ser Glu Gln Gly Thr Ser Phe Ser Gln Thr Cys Leu Thr Gln Phe Leu  
 85 90 95

Glu Asp Glu Tyr Pro Asp Met Pro Thr Glu Gly Ile Lys Asn Leu Val  
 100 105 110

Asp Phe Leu Thr Gly Glu Glu Val Val Cys His Val Ala Arg Asn Leu  
 115 120 125

Ala Val Glu Gln Leu Thr Leu Ser Glu Glu Phe Pro Val Pro Pro Ala  
 130 135 140

Val Leu Gln Gln Thr Phe Phe Ala Val Ile Gly Ala Leu Leu Gln Ser  
 145 150 155 160

Ser Gly Pro Glu Arg Thr Ala Leu Phe Ile Arg Asp Phe Leu Ile Thr  
 165 170 175

Gln Met Thr Gly Lys Glu Leu Phe Glu Met Trp Lys Ile Ile Asn Pro  
 180 185 190

## 4558

Met Gly Leu Leu Val Glu Glu Leu Lys Lys Arg Asn Val Ser Ala Pro  
 195 200 205

Glu Ser Arg Leu Thr Arg Gln Ser Gly Gly Thr Thr Ala Leu Pro Leu  
 210 215 220

Tyr Phe Val Gly Leu Tyr Cys Asp Lys Lys Leu Ile Ala Glu Gly Pro  
 225 230 235 240

Gly Glu Thr Val Leu Val Ala Glu Glu Glu Ala Ala Arg Val Ala Leu  
 245 250 255

Arg Lys Leu Tyr Gly Phe Thr Glu Asn Arg Arg Pro Trp Asn Tyr Ser  
 260 265 270

Lys Pro Lys Glu Thr Leu Arg Ala Glu Lys Ser Ile Thr Ala Ser  
 275 280 285

&lt;210&gt; 5063

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5063

Ile Leu Thr Glu Phe Leu Glu Met Ile Val Asn Cys Leu Gln Ile Ile  
 1 5 10 15

Glu Lys Cys Ile Tyr Leu Cys Val Cys Val Cys Gln Lys Cys Asn Cys  
 20 25 30

Phe Ile Ile Phe Phe Pro Tyr Leu Tyr Ile Leu Phe Asn Thr Trp Phe  
 35 40 45

Ile Ser Thr Val His Cys Phe Leu Cys Pro Lys Leu Thr  
 50 55 60

&lt;210&gt; 5064

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (112)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4559

&lt;221&gt; SITE

&lt;222&gt; (122)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (123)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5064

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Pro | Phe | Thr | Ile | Leu | Thr | Lys | Glu | Ile | Phe | Phe | Phe | Thr | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Val | Cys | Glu | Asn | Lys | Glu | Leu | Cys | Ser | Ser | Pro | Arg | Trp | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ala | Ile | Gln | Lys | Ser | Asn | Phe | Ser | Lys | Val | Thr | Ser | Phe | Phe | Met |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Cys | His | His | Phe | Lys | Gly | Leu | Ala | Pro | Leu | Pro | His | Val | Tyr | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Asn | Cys | Arg | Pro | Ile | Ser | Cys | Leu | Gly | Leu | Thr | Leu | Met | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ala | Ser | Ser | Phe | Pro | Glu | Val | Lys | Val | Pro | Val | Met | Tyr | Ser | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asn | Ile | Phe | Gln | Leu | Phe | Met | Ser | Phe | Thr | Thr | Lys | Lys | Lys | Xaa |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ser | Gly | Met | Gly | Val | Gln | Leu | Leu | Xaa | Xaa | Phe | Leu | Val | Arg | Ile |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |
|-----|-----|
| Phe | Tyr |
|     | 130 |

&lt;210&gt; 5065

&lt;211&gt; 342

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5065

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Arg | His | Glu | Gly | Leu | Gly | Arg | Met | Lys | Pro | Asn | Thr | Leu | Val | Leu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4560

| 1   | 5   | 10  | 15  |
|---|-----|-----|-----|
| Gly Phe Xaa Lys Asp Trp Leu Gln Ala Asp Met Arg Asp Val Asp Met | 20  | 25  | 30  |
| Tyr Ile Asn Leu Phe His Asp Ala Phe Asp Ile Gln Tyr Gly Val Val | 35  | 40  | 45  |
| Val Ile Arg Leu Lys Glu Gly Leu Asp Ile Ser His Leu Gln Gly Gln | 50  | 55  | 60  |
| Glu Glu Leu Leu Ser Ser Gln Glu Lys Ser Pro Gly Thr Lys Asp Val | 65  | 70  | 75  |
| Val Val Ser Val Glu Tyr Ser Lys Lys Ser Asp Leu Asp Thr Ser Lys | 85  | 90  | 95  |
| Pro Leu Ser Glu Lys Pro Ile Thr His Lys Val Glu Glu Glu Asp Gly | 100 | 105 | 110 |
| Lys Thr Ala Thr Gln Pro Leu Leu Lys Lys Glu Ser Lys Gly Pro Ile | 115 | 120 | 125 |
| Val Pro Leu Asn Val Ala Asp Gln Lys Leu Leu Glu Ala Ser Thr Gln | 130 | 135 | 140 |
| Phe Gln Lys Lys Gln Gly Lys Asn Thr Ile Asp Val Trp Trp Leu Phe | 145 | 150 | 155 |
| Asp Asp Gly Gly Leu Thr Leu Leu Ile Pro Tyr Leu Leu Thr Thr Lys | 165 | 170 | 175 |
| Lys Lys Trp Lys Asp Cys Lys Ile Arg Val Phe Ile Gly Gly Lys Ile | 180 | 185 | 190 |
| Asn Arg Ile Asp His Asp Arg Arg Ala Met Ala Thr Leu Leu Ser Lys | 195 | 200 | 205 |
| Phe Arg Ile Asp Phe Ser Asp Ile Met Val Leu Gly Asp Ile Asn Thr | 210 | 215 | 220 |
| Lys Pro Lys Lys Glu Asn Ile Ile Ala Phe Glu Glu Ile Ile Glu Pro | 225 | 230 | 235 |
| Tyr Arg Leu His Glu Asp Asp Lys Glu Gln Asp Ile Ala Asp Lys Met | 245 | 250 | 255 |
| Lys Glu Asp Glu Pro Trp Arg Ile Thr Asp Asn Glu Leu Glu Leu Tyr | 260 | 265 | 270 |
| Lys Thr Lys Thr Tyr Arg Gln Ile Arg Leu Asn Glu Leu Leu Lys Glu |     |     |     |

## 4561

275                      280                      285  
 His Ser Ser Thr Ala Asn Ile Ile Val Met Ser Leu Pro Val Ala Arg  
 290                      295                      300  
 Lys Gly Ala Val Ser Ser Ala Leu Tyr Met Ala Trp Leu Glu Ala Leu  
 305                      310                      315                      320  
 Ser Lys Asp Leu Pro Pro Ile Leu Leu Val Arg Gly Asn His Gln Ser  
 325                      330                      335  
 Val Leu Thr Phe Tyr Ser  
 340

&lt;210&gt; 5066

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5066

Gln His Arg Asp Lys Met Gln Gln Ser Lys Asn Gln Val Val Ser Ser  
 1                      5                      10                      15  
 Thr Asn Gly Glu Leu Asn Thr Asp Asp Pro Thr Ala Gly Arg Ser Asn  
 20                      25                      30  
 Ala Pro Ile Thr Ala Pro Thr Glu Val Glu Val Met Asp Glu Thr Lys  
 35                      40                      45  
 Cys Cys Cys Phe Phe Lys Arg Arg Lys Arg Lys Thr Ile Gln Arg His  
 50                      55                      60  
 Lys  
 65

&lt;210&gt; 5067

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4562

&lt;222&gt; (63)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (64)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5067

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Arg | His | Glu | Glu | Leu | Asp | Lys | Leu | Leu | Ser | Ser | Phe | Lys | Ser | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Glu | Lys | Glu | Gln | Ala | Glu | Ile | Gln | Ile | Lys | Glu | Glu | Ser | Lys |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ala | Val | Glu | Met | Leu | Gln | Asn | Gln | Leu | Lys | Glu | Leu | Asn | Glu | Ala |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | Ala | Xaa | Cys | Gly | Asp | Gln | Glu | Ile | Met | Lys | Ala | Thr | Xaa | Xaa |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Asp | Pro | Pro | Ile | Glu | Glu | Arg | Ala | Ser | Ser | Glu | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |

&lt;210&gt; 5068

&lt;211&gt; 192

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5068

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Cys | Arg | Leu | Glu | Gly | Ser | Met | Glu | Val | His | Gly | Lys | Pro | Lys | Ala |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Ser | Cys | Ser | Ser | Pro | Thr | Arg | Asp | Ser | Ser | Gly | Val | Pro | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Lys | Glu | Leu | Leu | Thr | Ala | Gly | Ser | Asp | Gly | Arg | Gly | Gly | Ile | Trp |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Arg | Leu | Leu | Ile | Asn | Ser | Gln | Pro | Lys | Ser | Arg | Lys | Thr | Ser | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Thr | Val | Arg | Ile | Glu | Arg | Ser | Pro | Leu | Leu | Asp | Gln | Val | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Phe | Leu | Pro | Gln | Met | Ala | Arg | Ala | Asn | Glu | Lys | Leu | Arg | Lys | Glu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ala | Ala | Pro | Pro | Gly | Arg | Phe | Asn | Ile | Glu | Asn | Ile | Asp | Gly |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4563

|   |     |     |
|---|-----|-----|
| 100   | 105 | 110 |
| Pro His Ser Lys Val Ile Gln Met Asp Val Ala Leu Phe Glu Met Asn |     |     |
| 115   | 120 | 125 |
| Gln Ser Asp Ser Lys Glu Val Asp Ser Ser Glu Glu Ser Ser Gln Asp |     |     |
| 130   | 135 | 140 |
| Ser Ser Glu Asn Ser Ser Glu Ser Glu Asp Glu Asp Asp Ser Ile Pro |     |     |
| 145   | 150 | 155 |
| Ser Glu Val Thr Ile Asp Asn Ile Lys Leu Pro Asn Ser Glu Gly Gly |     |     |
| 165   | 170 | 175 |
| Lys Gly Lys Ile Glu Val Leu Asp Ser Pro Ala Ser Lys Lys Lys Lys |     |     |
| 180   | 185 | 190 |

&lt;210&gt; 5069

&lt;211&gt; 39

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5069

|   |
|---|
| Leu Thr Ser Val Asn Ser Ser Pro Thr Arg Leu Met Thr Thr Phe Ile |
| 1 5 10 15   |

|   |
|---|
| Leu His Glu Xaa Ile Val Phe Val Ser Thr Val Phe Tyr Tyr Phe Arg |
| 20 25 30  |

|                             |
|-----------------------------|
| Ala Ser Leu Arg His Thr Ile |
| 35                          |

&lt;210&gt; 5070

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE



## 4564

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (22)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (121)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (123)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (125)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (142)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5070

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Gly | Ala | Glu | Ala | Xaa | Asp | Lys | Lys | Pro | Arg | Asp | Leu | Phe | Gly |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Gly | Pro | Pro | Xaa | Ala | Glu | Val | Thr | Ala | Glu | Thr | Leu | Leu | His |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Phe | Gln | Glu | Leu | Leu | Lys | Glu | Ala | Thr | Glu | Arg | Arg | Phe | Ser | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Asp | Pro | Leu | Leu | Pro | Gln | Gly | Ala | Gly | Leu | Arg | Leu | Val | Gly |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Phe | His | Cys | Arg | Leu | Gln | Gly | Pro | Arg | Arg | Val | Asp | Lys | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Val | Glu | Leu | His | Gly | Phe | Gln | Ala | Pro | Ala | Ala | Gln | Gly | Ala |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Arg | Gly | Ser | Gly | Leu | Ser | Leu | Ala | Ser | Gly | Arg | Phe | Thr | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Val | Ser | Gly | Ile | Phe | Gln | Phe | Xaa | Ala | Xaa | Leu | Xaa | Val | Gly | Ala |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4565

115                                      120                                      125  
 Gly Trp Gly Ser Ala Val Cys Cys Asp Gly Ala Gly Ala Xaa Leu Ser  
     130                                      135                                      140  
  
 Gly Gly  
 145  
  
 <210> 5071  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5071  
 Glu Arg Ser His Leu Gln Pro Gly Ala Val Gly Ile Thr Glu Ser Pro  
     1                                      5                                      10                                      15  
  
 Ile Leu Gly Leu Gly Ser Ala Met Thr Thr Glu Ile Gly Trp Trp Lys  
                     20                                      25                                      30  
  
 Leu Thr Phe Leu Arg Lys Lys Lys Ser Thr Pro Lys Val Leu Tyr Glu  
             35                                      40                                      45  
  
 Ile Pro Asp Thr Tyr Ala Gln Thr Glu Gly Asp Ala Glu Pro Pro Arg  
     50                                      55                                      60  
  
 Pro Asp Ala Gly Gly Pro Asn Ser Asp Phe Asn Thr Arg Leu Glu Lys  
     65                                      70                                      75                                      80  
  
 Ile Val Asp Lys Ser Thr Lys Gly Lys His Val Lys Val Ser Asn Ser  
                     85                                      90                                      95  
  
 Gly Arg Phe Lys Glu Lys Lys Lys Val Arg Ala Thr Leu Ala Glu Asn  
                     100                                      105                                      110  
  
 Pro Asn Leu Phe Asp Asp His Glu Glu Gly Arg Ser Ser Lys  
             115                                      120                                      125

<210> 5072  
 <211> 205  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (54)  
 <223> Xaa equals any of the naturally occurring L-amino acids

## 4566

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (190)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5072

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Cys | Ser | Leu | Lys | Thr | Pro | Leu | Ser | Glu | Asn | Asp | Met | Pro | Ser | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Asn | Ser | Glu | Leu | Val | Arg | Gly | Pro | Leu | Ala | Ala | Pro | Gly | Gly | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Arg | Tyr | Ser | Arg | Ser | Ala | Gly | Met | Tyr | Met | Gln | Ser | Gly | Ser | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Asn | Cys | Gly | Val | Xaa | Arg | Gly | Cys | Gly | Leu | Ala | Pro | Ser | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Arg | Asp | Glu | Gly | Ser | Ser | Pro | Ser | Leu | Ala | Leu | Asn | Thr | Tyr | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Tyr | Leu | Ser | Gln | Leu | Asp | Ser | Trp | Gly | Asp | Pro | Lys | Ala | Ala | Tyr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Glu | Gln | Pro | Val | Gly | Arg | Pro | Leu | Ser | Ser | Cys | Ser | Tyr | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Val | Lys | Glu | Glu | Asn | Val | Cys | Cys | Met | Tyr | Ser | Ala | Glu | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Lys | Ser | Gly | Pro | Glu | Ala | Ala | Leu | Tyr | Ser | His | Pro | Leu | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Cys | Leu | Gly | Glu | His | Glu | Val | Pro | Val | Pro | Ser | Tyr | Tyr | Arg |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Arg | Ala | Thr | Pro | Arg | Trp | Thr | Arg | Arg | Pro | Thr | Val | Leu | Gly |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Thr | Thr | Ser | Lys | Pro | Leu | Ser | Ser | Ser | Gly | Pro | Val | Xaa | Thr | Arg |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Asn | Ile | Trp | Asn | Arg | Leu | Ser | Trp | Gly | Ala | Lys |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |

&lt;210&gt; 5073

&lt;211&gt; 84

&lt;212&gt; PRT

4567

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (61)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (64)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (67)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (78)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (82)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5073

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Ser | Asn | Pro | Asp | Lys | Ser | Arg | Cys | Leu | Gly | Val | Arg | His | Ile |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asp | Ile | Gly | Leu | Trp | Leu | Gln | Asn | Arg | Asn | Leu | Gly | Gly | Leu | Gln |
|     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Leu | Gly | Arg | Leu | Leu | Leu | Leu | Arg | Leu | Leu | Leu | Ile | Ile | Leu |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Leu | Leu | Leu | Leu | Leu | Leu | Leu | Asn | Arg | Gln | Xaa | Asn | Gln | Xaa |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | His | Xaa | Val | His | His | Gln | Ser | Pro | Gly | Pro | Cys | Gly | Xaa | Glu | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

Leu Xaa Thr Asn

&lt;210&gt; 5074

&lt;211&gt; 61

&lt;212&gt; PRT

## 4568

&lt;213&gt; Homo sapiens

&lt;400&gt; 5074

Gly Arg Ala Lys Glu Arg Lys Val Asn Lys Lys Lys Gln Gln Gln Gln  
1 5 10 15  
Gln Pro Pro Gln Pro Pro Met Ala His Asp Ile Thr Ala Thr Pro Ala  
20 25 30  
Gly Pro Ser Leu Gly Gly Leu Cys Pro Ser Asn Thr Ser Leu Leu Ala  
35 40 45  
Thr Ser Ser Pro Met Pro Val Lys Glu Glu Phe Leu Pro  
50 55 60

&lt;210&gt; 5075

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5075

Phe His His Val Ala Gln Ala Gly Leu Asp Leu Pro Thr Ser Ser Asp  
1 5 10 15  
Leu Pro Ala Pro Thr Ser Gln Ser Ala Gly Ile Thr Gly Leu Ser His  
20 25 30  
Arg Ala Arg Pro Val Leu Phe Val Phe Val Glu Arg Trp Gly Phe Ala  
35 40 45  
Met Leu Pro Arg Leu Ile Ser Asn Ser  
50 55

&lt;210&gt; 5076

&lt;211&gt; 218

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (59)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (68)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4569

&lt;400&gt; 5076

Glu Val Leu Pro Gly Pro Gly Ser Thr Arg Val Trp Pro Gly Pro Ser  
 1 5 10 15  
 Val Ser Pro Arg Pro Gln Gly Gly Ala Leu Ser Thr Gln Lys Gly Pro  
 20 25 30  
 Lys Ala Gly His Gly Gly Ala Glu Glu Phe Gly Arg Cys Lys Gln Pro  
 35 40 45  
 His Ala Arg Gly Gly Gly Asp Cys Phe Ser Xaa Arg Pro His Ala Ser  
 50 55 60  
 Thr Phe His Xaa Ala Cys Pro Leu Leu Met Cys Ser Ser Gln Cys Leu  
 65 70 75 80  
 Cys Glu Pro Thr Ser Ala Gln Ser Tyr Pro Ser Ser Ala Cys Gly Asp  
 85 90 95  
 Pro Ala Pro Ala Ala Leu Leu Leu Pro Arg Pro Gln Thr Ala Trp Trp  
 100 105 110  
 Arg Val Leu His Leu Gly Gln Ala Gly Val His Pro Ala Lys Asp Lys  
 115 120 125  
 Ala Ala Ser Thr Cys Pro Arg Ile Gln Met Val His Trp Pro Arg Glu  
 130 135 140  
 Glu Ser Asp Gln Lys Trp Ser Pro Leu Cys Gly Glu Ala Pro Thr Pro  
 145 150 155 160  
 Pro Arg Glu Thr Val Pro Arg Cys Gly Ser Pro Pro Ser Leu Val Gly  
 165 170 175  
 His Ser Trp Pro Gly Pro Pro Ile Leu Arg Ser Phe Pro Gly Cys Gly  
 180 185 190  
 Phe Asp Leu Arg Ser Gly Ser Gly Leu Ala Ser Gly Val Trp Pro Gly  
 195 200 205  
 Pro Ala Cys Cys Ser Leu Leu Gly Gly Pro  
 210 215

&lt;210&gt; 5077

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4570

&lt;400&gt; 5077

Gly Ser Ser Thr Ile Lys Ala Tyr Leu Ile Asn Asn Tyr Phe Cys Lys  
1 5 10 15

Gln Val Gly Leu Thr Tyr Ser Ser Ser Phe Cys Leu Asp Met Asn Leu  
20 25 30

Arg Ser Ser Cys Leu Lys Thr Phe Thr Leu Leu Phe Ser Asp Thr Phe  
35 40 45

Pro Ser Tyr Phe Phe Phe Phe Phe Gly Cys Cys  
50 55

&lt;210&gt; 5078

&lt;211&gt; 154

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (11)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (23)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4571

&lt;221&gt; SITE

&lt;222&gt; (28)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (75)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5078

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ile | Leu | Glu | Leu | Gln | Met | Gln | Ser | Ile | Xaa | Glu | Lys | Lys | Met | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Xaa | Arg | Asn | Ile | Ala | Xaa | His | Xaa | Xaa | Asn | Xaa | Pro | Ser | Leu | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Phe | Leu | Cys | Lys | Asn | Cys | Ser | Val | Leu | Ala | Cys | Ser | Gly | Glu | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | His | Val | Ile | Glu | Lys | Met | His | His | Val | Asn | Met | Thr | Pro | Glu | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Leu | Tyr | Ile | Val | Arg | Glu | Asn | Lys | Xaa | Leu | Gln | Lys | Lys | Cys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Tyr | Gln | Ile | Asn | Gly | Glu | Ile | Ile | Cys | Lys | Cys | Gly | Gln | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Gly | Thr | Met | Met | Val | His | Lys | Gly | Leu | Asp | Leu | Pro | Cys | Leu | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Arg | Asn | Phe | Val | Val | Val | Phe | Lys | Asn | Asn | Ser | Thr | Lys | Lys | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Lys | Lys | Trp | Val | Glu | Leu | Pro | Ile | Thr | Phe | Pro | Asn | Leu | Asp | Tyr |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Glu | Cys | Cys | Leu | Phe | Ser | Asp | Glu | Asp |
| 145 |     |     |     |     | 150 |     |     |     |     |

&lt;210&gt; 5079

&lt;211&gt; 254

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids



## 4572

&lt;400&gt; 5079

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ile | Glu | Ile | Asn | Pro | His | Val | Lys | Gly | Thr | Lys | Ala | Gly | Ala | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Arg | Cys | Gly | Arg | Ser | Arg | Thr | Ser | Gly | Ser | Pro | Gly | Leu | Gln | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Gly | Thr | Ser | Ser | Ser | Thr | Pro | Ala | Arg | Pro | Ser | Ser | His | His | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Cys | Phe | Leu | Gly | Pro | Glu | Ile | Met | Pro | Leu | Gly | Leu | Leu | Trp | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Leu | Ala | Leu | Leu | Gly | Ala | Leu | His | Ala | Gln | Ala | Gln | Asp | Ser | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ser | Asp | Leu | Ile | Pro | Ala | Pro | Pro | Leu | Ser | Lys | Val | Pro | Leu | Gln | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asn | Phe | Gln | Asp | Asn | Gln | Phe | Gln | Gly | Lys | Trp | Tyr | Val | Val | Gly | Leu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Ala | Gly | Asn | Ala | Ile | Leu | Arg | Glu | Asp | Lys | Asp | Pro | Gln | Lys | Met | Tyr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ala | Thr | Ile | Tyr | Glu | Leu | Lys | Glu | Asp | Lys | Ser | Tyr | Asn | Val | Thr | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Leu | Phe | Arg | Lys | Lys | Lys | Cys | Asp | Tyr | Trp | Ile | Arg | Thr | Phe | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Pro | Gly | Cys | Gln | Pro | Gly | Glu | Phe | Thr | Leu | Gly | Asn | Ile | Lys | Ser | Tyr |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Pro | Gly | Leu | Thr | Ser | Tyr | Leu | Val | Arg | Val | Val | Ser | Thr | Asn | Tyr | Asn |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Gln | His | Ala | Met | Val | Phe | Phe | Lys | Lys | Val | Ser | Gln | Asn | Arg | Glu | Tyr |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Phe | Lys | Ile | Thr | Leu | Tyr | Gly | Arg | Thr | Lys | Glu | Leu | Thr | Ser | Glu | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Lys | Glu | Asn | Phe | Ile | Arg | Phe | Ser | Lys | Ser | Leu | Gly | Leu | Pro | Glu | Asn |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| His | Ile | Val | Phe | Pro | Val | Pro | Ile | Asp | Gln | Cys | Ile | Asp | Gly |     |     |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     |     |     |

## 4573

&lt;210&gt; 5080

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5080

Gln Ala Ala Asp Lys Tyr Val Asp Asp Met Gly Gln Leu Arg Ala Pro  
 1 5 10 15

Phe Ala Cys His Leu Pro Pro Leu Leu Trp Met Val Ser Pro Leu Ala  
 20 25 30

Arg Leu Pro Gly Thr Asp His Val Ala Ile Lys Ala Asn Val Asn Lys  
 35 40 45

Tyr His Glu Thr Val Val Cys Ile Val Phe  
 50 55

&lt;210&gt; 5081

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5081

Ser Leu Ala Phe Gln Gly Ala Ser Ile Ala Leu His His Asp Leu Ala  
 1 5 10 15

Leu Val Leu Leu Arg Asp Leu Pro Thr Ala Gly Ser Val Pro Ser Ser  
 20 25 30

Val Ile Val Leu His Ser Asp Thr Ile Ile Ala Gly Leu Asn Ile Ala  
 35 40 45

Ile Asn Met Ser Val Pro Gln Ala Glu Arg Gly Phe Leu Ile Leu Arg  
 50 55 60

Glu Gln Lys Val Phe Trp Leu Lys Arg Leu Lys Thr  
 65 70 75

&lt;210&gt; 5082

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5082

Lys Tyr Leu Arg Ala Ile Ile Val Gly His Leu Arg Ser Ser Val Asn

## 4574

|   |    |    |    |
|---|----|----|----|
| 1   | 5  | 10 | 15 |
| Ser Glu Leu Ala Asn Leu Ser Leu Cys Val Ser Thr Leu Ile Phe Phe |    |    |    |
| 20  | 25 | 30 |    |
| Phe Ser Trp Val Ser Glu Ala Ser Lys Phe Phe Gln Lys Trp Ser Ile |    |    |    |
| 35  | 40 | 45 |    |
| Thr Lys Leu Ser Glu Thr Gln Tyr Leu Met Tyr Cys Thr Arg Leu Pro |    |    |    |
| 50  | 55 | 60 |    |
| Asn Ser   |    |    |    |
| 65  |    |    |    |

&lt;210&gt; 5083

&lt;211&gt; 361

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (24)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (344)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (350)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (356)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (359)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4575

&lt;400&gt; 5083

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Leu | His | Arg | Gly | Asp | Asp | Arg | Ser | Arg | Thr | Ser | Gly | Ser | Pro | Gly | 1   | 5   | 10  | 15  |
| Leu | Gln | Glu | Phe | Gly | Arg | Gly | Xaa | Ala | Gly | Val | Gly | Gly | Arg | Pro | Arg | 20  | 25  | 30  |     |
| Arg | Arg | Arg | Arg | Lys | Gly | Ala | Ala | Ser | Arg | Ala | Arg | Leu | Pro | Phe | Ser | 35  | 40  | 45  |     |
| Leu | Ser | Ile | Met | Asp | Pro | Ser | Leu | Leu | Arg | Glu | Arg | Glu | Leu | Phe | Lys | 50  | 55  | 60  |     |
| Lys | Arg | Ala | Leu | Ser | Thr | Pro | Val | Val | Glu | Lys | Arg | Ser | Ala | Ser | Ser | 65  | 70  | 75  | 80  |
| Glu | Ser | Ser | Ser | Ser | Ser | Ser | Lys | Lys | Lys | Lys | Thr | Lys | Val | Glu | His | 85  | 90  | 95  |     |
| Gly | Gly | Ser | Ser | Gly | Ser | Lys | Gln | Asn | Ser | Asp | His | Ser | Asn | Gly | Ser | 100 | 105 | 110 |     |
| Phe | Asn | Leu | Lys | Ala | Leu | Ser | Gly | Ser | Ser | Gly | Tyr | Lys | Phe | Gly | Val | 115 | 120 | 125 |     |
| Leu | Ala | Lys | Ile | Val | Asn | Tyr | Met | Lys | Thr | Arg | His | Gln | Arg | Gly | Asp | 130 | 135 | 140 |     |
| Thr | His | Pro | Leu | Thr | Leu | Asp | Glu | Ile | Leu | Asp | Glu | Thr | Gln | His | Leu | 145 | 150 | 155 | 160 |
| Asp | Ile | Gly | Leu | Lys | Gln | Lys | Gln | Trp | Leu | Met | Thr | Glu | Ala | Leu | Val | 165 | 170 | 175 |     |
| Asn | Asn | Pro | Lys | Ile | Glu | Val | Ile | Asp | Gly | Lys | Tyr | Ala | Phe | Lys | Pro | 180 | 185 | 190 |     |
| Lys | Tyr | Asn | Val | Arg | Asp | Lys | Lys | Ala | Leu | Leu | Arg | Leu | Leu | Asp | Gln | 195 | 200 | 205 |     |
| His | Asp | Gln | Arg | Gly | Leu | Gly | Gly | Ile | Leu | Leu | Glu | Asp | Ile | Glu | Glu | 210 | 215 | 220 |     |
| Ala | Leu | Pro | Asn | Ser | Gln | Lys | Ala | Val | Lys | Ala | Leu | Gly | Asp | Gln | Ile | 225 | 230 | 235 | 240 |
| Leu | Phe | Val | Asn | Arg | Pro | Asp | Lys | Lys | Lys | Ile | Leu | Phe | Phe | Asn | Asp | 245 | 250 | 255 |     |
| Lys | Ser | Cys | Gln | Phe | Ser | Val | Asp | Glu | Glu | Phe | Gln | Lys | Leu | Trp | Arg | 260 | 265 | 270 |     |

## 4576

Ser Val Thr Val Asp Ser Met Asp Glu Glu Lys Ile Glu Glu Tyr Leu  
 275 280 285

Lys Arg Gln Gly Ile Ser Ser Met Gln Glu Ser Gly Pro Lys Lys Val  
 290 295 300

Ala Pro Ile Gln Arg Arg Lys Lys Pro Ala Ser Gln Lys Lys Arg Arg  
 305 310 315 320

Phe Lys Thr His Asn Glu His Leu Ala Gly Val Leu Lys Asp Tyr Ser  
 325 330 335

Asp Ile Thr Ser Ser Asn Arg Xaa Gln Phe Cys Leu Gly Xaa Glu Leu  
 340 345 350

Gln Ile His Xaa Gln Glu Xaa Ser Cys  
 355 360

<210> 5084

<211> 69

<212> PRT

<213> Homo sapiens

<400> 5084

Ile Arg Asn Thr Cys Ile Trp Trp Lys Pro Trp Ile Ser Thr Ser Ser  
 1 5 10 15

Asn Tyr Ser Ser Leu Tyr Ser Leu Leu Cys Lys Leu Val Tyr Asn Leu  
 20 25 30

Gln Ala Asp Leu Lys Ile Phe Leu Tyr Leu Ile Ala Ala Ala Phe Ile  
 35 40 45

Leu Gly Ser Ala Val Thr Phe Asn Tyr Leu Asn Leu Leu Pro Glu Gly  
 50 55 60

Met Ser Leu Thr Phe  
 65

<210> 5085

<211> 100

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

## 4577

&lt;222&gt; (93)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (94)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (98)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5085

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Trp | Phe | Arg | Trp | Phe | Gln | Phe | Ser | Asp | Ile | Ser | Ser | Ser | Arg | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Ser | Leu | Cys | His | Ser | His | Leu | Ala | Thr | Ala | Ala | Gly | Gly | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Asp | Lys | Asp | Leu | Ser | Ile | Gly | Pro | Ala | His | Gly | Gly | Asn | Thr | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Pro | Gly | Ala | Asp | Ala | Phe | Phe | Arg | Ala | Val | Thr | Thr | Pro | Glu | His |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Thr | Leu | Glu | Thr | Ile | Leu | Arg | His | Asn | Gln | Leu | Ile | Leu | Glu | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Gln | Gln | Lys | Ile | Glu | Cys | Lys | Leu | Phe | Thr | Ser | Xaa | Xaa | Glu | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Leu | Xaa | Lys | Leu |
|     |     |     | 100 |

&lt;210&gt; 5086

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5086

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Ala | Thr | Arg | Glu | Ala | Glu | Ala | Gly | Glu | Ser | Leu | Glu | Pro | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Arg | Trp | Arg | Leu | Gln |
|     |     |     |     | 20  |

## 4578

&lt;210&gt; 5087

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5087

Asp Leu Glu Glu Ile Ile Leu Tyr Tyr Phe Leu Ser Val Phe Phe Asn  
 1 5 10 15

Ala Phe Thr Ser Gly Val Gly Met Leu Asp Phe Ile Phe Leu Lys Thr  
 20 25 30

Asn Lys Ile Trp Lys Ala Leu Pro Leu Asn Val Thr  
 35 40

&lt;210&gt; 5088

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (75)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5088

Ser Leu Glu Asn Asp Lys Met Arg Leu Glu Lys Asp Leu Ser Phe Lys  
 1 5 10 15

Asp Thr Gln Leu Lys Glu Tyr Glu Glu Leu Leu Ala Ser Val Arg Ala  
 20 25 30

Asn Asn His Gln Gln Gln Gln Gly Leu Gln Asp Ser Ser Ser Lys Cys  
 35 40 45

Gln Ala Leu Glu Glu Asn Asn Leu Ser Leu Arg His Thr Leu Ser Asp  
 50 55 60

Met Glu Tyr Arg Leu Lys Glu Leu Glu Tyr Xaa Lys Arg Asn Leu Glu  
 65 70 75 80

Gln Glu Asn Gln Asn Leu Arg Met Gln Val Ser Glu Thr Cys Thr Gly  
 85 90 95

Pro Met Leu Gln Ala Lys Met Asp Glu Ile Gly Asn His Tyr Thr Glu  
 100 105 110

Met Val Lys Asn Leu Arg Met Glu Lys Asp Arg Glu Ile Cys Arg Leu  
 115 120 125

## 4579

Arg Ser Gln Leu Asn Gln Tyr His Lys Asp Val Ser Lys Arg Glu Gly  
 130 135 140

Ser Cys Ser Asp Phe Gln Phe Lys Leu His Glu Leu Thr Ser Leu Leu  
 145 150 155 160

Glu Glu Lys Asp Ser Leu Ile Lys Arg Gln Ser Glu Glu Leu Ser Lys  
 165 170 175

Leu Arg Gln Glu Ile Tyr Ser Ser His Asn Gln Pro Ser Thr Gly Gly  
 180 185 190

Arg Thr Thr Ile Thr Thr Lys Lys Tyr Arg Thr Gln Tyr Pro Ile Leu  
 195 200 205

Gly Leu Leu Tyr Asp Asp Tyr Glu Tyr Ile Pro Pro Gly Ser Glu Thr  
 210 215 220

Gln Thr Ile Val Ile Glu Lys Thr Glu Asp Lys Tyr Thr Cys Pro  
 225 230 235

<210> 5089

<211> 124

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5089

Pro Thr Arg Arg Pro Arg Val Xaa Gly Ala Glu Phe Arg Lys Ile Pro  
 1 5 10 15

Thr Ser Met Lys Ala Lys Arg Ser His Gln Ala Ile Ile Met Ser Thr  
 20 25 30

Ser Leu Arg Val Ser Pro Ser Ile His Gly Tyr His Phe Asp Thr Ala  
 35 40 45

Ser Arg Lys Lys Ala Val Gly Asn Ile Phe Glu Asn Thr Asp Gln Glu  
 50 55 60

Ser Leu Glu Arg Leu Phe Arg Asn Ser Gly Asp Lys Lys Ala Glu Glu  
 65 70 75 80

Arg Ala Lys Ile Ile Phe Ala Ile Asp Gln Asp Val Glu Glu Lys Thr



## 4580

|   |     |     |
|---|-----|-----|
| 85  | 90  | 95  |
| Arg Ala Leu Met Ala Leu Lys Lys Arg Thr Lys Asp Lys Leu Phe Gln |     |     |
| 100   | 105 | 110 |
| Phe Leu Lys Leu Arg Lys Tyr Ser Ile Lys Val His                 |     |     |
| 115   | 120 |     |
| <br><210> 5090  |     |     |
| <211> 216   |     |     |
| <212> PRT   |     |     |
| <213> Homo sapiens  |     |     |
| <br><400> 5090  |     |     |
| Gly His Met Glu Leu Ala Met Asp Asn Ser Tyr Ala Phe Asn Gln Arg |     |     |
| 1   | 5   | 10  |
| Ser Thr Cys Asn Gly Ile Pro Ser Glu Lys Lys Asn Asn Phe Leu Val |     |     |
| 20  | 25  | 30  |
| Ser Glu Asp His Gly Gln Lys Ile Leu Ser Val Leu Gln Asn Phe Arg |     |     |
| 35  | 40  | 45  |
| Glu Gln Asn Val Phe Tyr Asp Phe Lys Ile Ile Met Lys Asp Glu Ile |     |     |
| 50  | 55  | 60  |
| Ile Pro Cys His Arg Cys Val Leu Ala Ala Cys Ser Asp Phe Phe Arg |     |     |
| 65  | 70  | 75  |
| Ala Met Phe Glu Val Asn Met Lys Glu Arg Asp Asp Gly Ser Val Thr |     |     |
| 85  | 90  | 95  |
| Ile Thr Asn Leu Ser Ser Lys Ala Val Lys Ala Phe Leu Asp Tyr Ala |     |     |
| 100   | 105 | 110 |
| Tyr Thr Gly Lys Thr Lys Ile Thr Asp Asp Asn Val Glu Met Phe Phe |     |     |
| 115   | 120 | 125 |
| Gln Leu Ser Ser Phe Leu Gln Val Ser Phe Leu Ser Lys Ala Cys Ser |     |     |
| 130   | 135 | 140 |
| Asp Phe Leu Ile Lys Ser Ile Asn Leu Val Asn Cys Leu Gln Leu Leu |     |     |
| 145   | 150 | 155 |
| Ser Ile Ser Asp Ser Tyr Gly Ser Thr Ser Leu Phe Asp His Ala Leu |     |     |
| 165   | 170 | 175 |
| His Phe Val Gln His His Phe Ser Leu Leu Phe Lys Ser Ser Asp Phe |     |     |
| 180   | 185 | 190 |

## 4581

Leu Glu Met Asn Phe Gly Val Leu Gln Lys Cys Leu Glu Ser Asp Glu  
 195 200 205

Leu Asn Val Pro Glu Glu Glu Lys  
 210 215

<210> 5091

<211> 535

<212> PRT

<213> Homo sapiens

<400> 5091

Ser Cys Arg Ile Arg His Glu Arg Leu Thr Ser Ala Val Ser Leu Gln  
 1 5 10 15

Leu Arg Ala Pro Gly Ala Ala Arg Pro Ala Ser Gly Leu Pro Asp Arg  
 20 25 30

Leu Trp Pro Ala Pro Ser Pro Ser Pro Gly Ala His Arg Ala Ala Ala  
 35 40 45

Gly Ala Glu Gln Pro Pro Ser Arg Pro Ser Ala Gly Pro Ala Arg Ser  
 50 55 60

Gly Arg Met Asn Asp Phe Gly Ile Lys Asn Met Asp Gln Val Ala Pro  
 65 70 75 80

Val Ala Asn Ser Tyr Arg Gly Thr Leu Lys Arg Gln Pro Ala Phe Asp  
 85 90 95

Thr Phe Asp Gly Ser Leu Phe Ala Val Phe Pro Ser Leu Asn Glu Glu  
 100 105 110

Gln Thr Leu Gln Glu Val Pro Thr Gly Leu Asp Ser Ile Ser His Asp  
 115 120 125

Ser Ala Asn Cys Glu Leu Pro Leu Leu Thr Pro Cys Ser Lys Ala Val  
 130 135 140

Met Ser Gln Ala Leu Lys Ala Thr Phe Ser Gly Phe Lys Lys Glu Gln  
 145 150 155 160

Arg Arg Leu Gly Ile Pro Lys Asn Pro Trp Leu Trp Ser Glu Gln Gln  
 165 170 175

Val Cys Gln Trp Leu Leu Trp Ala Thr Asn Glu Phe Ser Leu Val Asn  
 180 185 190

## 4582

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asn | Leu | Gln | Arg | Phe | Gly | Met | Asn | Gly | Gln | Met | Leu | Cys | Asn | Leu | 195 | 200 | 205 |
| Gly | Lys | Glu | Arg | Phe | Leu | Glu | Leu | Ala | Pro | Asp | Phe | Val | Gly | Asp | Ile | 210 | 215 | 220 |
| Leu | Trp | Glu | His | Leu | Glu | Gln | Met | Ile | Lys | Glu | Asn | Gln | Glu | Lys | Thr | 225 | 230 | 235 |
| Glu | Asp | Gln | Tyr | Glu | Glu | Asn | Ser | His | Leu | Thr | Ser | Val | Pro | His | Trp | 245 | 250 | 255 |
| Ile | Asn | Ser | Asn | Thr | Leu | Gly | Phe | Gly | Thr | Glu | Gln | Ala | Pro | Tyr | Gly | 260 | 265 | 270 |
| Met | Gln | Thr | Gln | Asn | Tyr | Pro | Lys | Gly | Gly | Leu | Leu | Asp | Ser | Met | Cys | 275 | 280 | 285 |
| Pro | Ala | Ser | Thr | Pro | Ser | Val | Leu | Ser | Ser | Glu | Gln | Glu | Phe | Gln | Met | 290 | 295 | 300 |
| Phe | Pro | Lys | Ser | Arg | Leu | Ser | Ser | Val | Ser | Val | Thr | Tyr | Cys | Ser | Val | 305 | 310 | 315 |
| Ser | Gln | Asp | Phe | Pro | Gly | Ser | Asn | Leu | Asn | Leu | Leu | Thr | Asn | Asn | Ser | 325 | 330 | 335 |
| Gly | Thr | Pro | Lys | Asp | His | Asp | Ser | Pro | Glu | Asn | Gly | Ala | Asp | Ser | Phe | 340 | 345 | 350 |
| Glu | Ser | Ser | Asp | Ser | Leu | Leu | Gln | Ser | Trp | Asn | Ser | Gln | Ser | Ser | Leu | 355 | 360 | 365 |
| Leu | Asp | Val | Gln | Arg | Val | Pro | Ser | Phe | Glu | Ser | Phe | Glu | Asp | Asp | Cys | 370 | 375 | 380 |
| Ser | Gln | Ser | Leu | Cys | Leu | Asn | Lys | Pro | Thr | Met | Ser | Phe | Lys | Asp | Tyr | 385 | 390 | 395 |
| Ile | Gln | Glu | Arg | Ser | Asp | Pro | Val | Glu | Gln | Gly | Lys | Pro | Val | Ile | Pro | 405 | 410 | 415 |
| Ala | Ala | Val | Leu | Ala | Gly | Phe | Thr | Gly | Ser | Gly | Pro | Ile | Gln | Leu | Trp | 420 | 425 | 430 |
| Gln | Phe | Leu | Leu | Glu | Leu | Leu | Ser | Asp | Lys | Ser | Cys | Gln | Ser | Phe | Ile | 435 | 440 | 445 |
| Ser | Trp | Thr | Gly | Asp | Gly | Trp | Glu | Phe | Lys | Leu | Ala | Asp | Pro | Asp | Glu | 450 | 455 | 460 |

## 4583

Val Ala Arg Arg Trp Gly Lys Arg Lys Asn Lys Pro Lys Met Asn Tyr  
 465 470 475 480

Glu Lys Leu Ser Arg Gly Leu Arg Tyr Tyr Tyr Asp Lys Asn Ile Ile  
 485 490 495

His Lys Thr Ser Gly Lys Arg Tyr Val Tyr Arg Phe Val Cys Asp Leu  
 500 505 510

Gln Asn Leu Leu Gly Phe Thr Pro Glu Glu Leu His Ala Ile Leu Gly  
 515 520 525

Val Gln Pro Asp Thr Glu Asp  
 530 535

<210> 5092

<211> 452

<212> PRT

<213> Homo sapiens

<400> 5092

Asp Pro Arg Val Arg Pro Arg Arg Pro Gln Ser Leu Ser Pro Val Leu  
 1 5 10 15

Ser Leu Ser Pro Asp Ser Met Ser Phe Thr Thr Arg Ser Thr Phe Ser  
 20 25 30

Thr Asn Tyr Arg Ser Leu Gly Ser Val Gln Ala Pro Ser Tyr Gly Ala  
 35 40 45

Arg Pro Val Ser Ser Ala Ala Ser Val Tyr Ala Gly Ala Gly Gly Ser  
 50 55 60

Gly Ser Arg Ile Ser Val Ser Arg Ser Thr Ser Phe Arg Gly Gly Met  
 65 70 75 80

Gly Ser Gly Gly Leu Ala Thr Gly Ile Ala Gly Gly Leu Ala Gly Met  
 85 90 95

Gly Gly Ile Gln Asn Glu Lys Glu Thr Met Gln Ser Leu Asn Asp Arg  
 100 105 110

Leu Ala Ser Tyr Leu Asp Arg Val Arg Ser Leu Glu Thr Glu Asn Arg  
 115 120 125

Arg Leu Glu Ser Lys Ile Arg Glu His Leu Glu Lys Lys Gly Pro Gln  
 130 135 140

Val Arg Asp Trp Ser His Tyr Phe Lys Ile Ile Glu Asp Leu Arg Ala

## 4584

|   |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|
| 145   |     | 150 |     | 155 |     | 160 |
| Gln Ile Phe Ala Asn Thr Val Asp Asn Ala Arg Ile Val Leu Gln Ile |     |     |     |     |     |     |
|   | 165 |     | 170 |     | 175 |     |
| Asp Asn Ala Arg Leu Ala Ala Asp Asp Phe Arg Val Lys Tyr Glu Thr |     |     |     |     |     |     |
|   | 180 |     | 185 |     | 190 |     |
| Glu Leu Ala Met Arg Gln Ser Val Glu Asn Asp Ile His Gly Leu Arg |     |     |     |     |     |     |
|   | 195 |     | 200 |     | 205 |     |
| Lys Val Ile Asp Asp Thr Asn Ile Thr Arg Leu Gln Leu Glu Thr Glu |     |     |     |     |     |     |
|   | 210 |     | 215 |     | 220 |     |
| Ile Glu Ala Leu Lys Glu Glu Leu Leu Phe Met Lys Lys Asn His Glu |     |     |     |     |     |     |
|   | 225 |     | 230 |     | 235 | 240 |
| Glu Glu Val Lys Gly Leu Gln Ala Gln Ile Ala Ser Ser Gly Leu Thr |     |     |     |     |     |     |
|   | 245 |     | 250 |     | 255 |     |
| Val Glu Val Asp Ala Pro Lys Ser Gln Asp Leu Ala Lys Ile Met Ala |     |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |     |
| Asp Ile Arg Ala Gln Tyr Asp Glu Leu Ala Arg Lys Asn Arg Glu Glu |     |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |     |
| Leu Asp Lys Tyr Trp Ser Gln Gln Ile Glu Glu Ser Thr Thr Val Val |     |     |     |     |     |     |
|   | 290 |     | 295 |     | 300 |     |
| Thr Thr Gln Ser Ala Glu Val Gly Ala Ala Glu Thr Thr Leu Thr Glu |     |     |     |     |     |     |
|   | 305 |     | 310 |     | 315 | 320 |
| Leu Arg Arg Thr Val Gln Ser Leu Glu Ile Asp Leu Asp Ser Met Arg |     |     |     |     |     |     |
|   | 325 |     | 330 |     | 335 |     |
| Asn Leu Lys Ala Ser Leu Glu Asn Ser Leu Arg Glu Val Glu Ala Arg |     |     |     |     |     |     |
|   | 340 |     | 345 |     | 350 |     |
| Tyr Ala Leu Gln Met Glu Gln Leu Asn Gly Ile Leu Leu His Leu Glu |     |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |     |
| Ser Glu Leu Ala Gln Thr Arg Ala Glu Gly Gln Arg Gln Ala Gln Glu |     |     |     |     |     |     |
|   | 370 |     | 375 |     | 380 |     |
| Tyr Glu Ala Leu Leu Asn Ile Lys Val Lys Leu Glu Ala Glu Ile Ala |     |     |     |     |     |     |
|   | 385 |     | 390 |     | 395 | 400 |
| Thr Tyr Arg Arg Leu Leu Glu Asp Gly Glu Asp Phe Asn Leu Gly Asp |     |     |     |     |     |     |
|   | 405 |     | 410 |     | 415 |     |
| Ala Leu Asp Ser Ser Asn Ser Met Gln Thr Ile Gln Lys Thr Thr Thr |     |     |     |     |     |     |

## 4585

420 425 430

Arg Arg Ile Val Asp Gly Lys Val Val Ser Glu Thr Asn Asp Thr Lys

435 440 445

Val Leu Arg His

450

```
<210> 5093
<211> 110
<212> PRT
<213> Homo sapiens
```

|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 5093 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Leu        | Ser | Ile | Phe | Ser | Ser | Ser | Pro | Ile | Met | Val | Asp | Asn | Asp | Ser | Ser |
| 1          |     |     |     | 5   |     |     |     | 10  |     |     |     | 15  |     |     |     |
| Gly        | Thr | Ser | Asp | Lys | Asp | His | Ser | Glu | Ile | Leu | Asp | Gly | Ile | Ser | Asn |
| 20         |     |     |     | 25  |     |     |     | 30  |     |     |     |     |     |     |     |
| Ile        | Lys | Leu | Asn | Ser | Glu | Glu | Val | Thr | Gln | Ser | Gln | Leu | Asp | Ser | Cys |
| 35         |     |     |     | 40  |     |     |     | 45  |     |     |     |     |     |     |     |
| Thr        | Ser | His | Asp | Gly | His | Gln | Gln | Leu | Ser | Glu | Val | Ser | Ser | Lys | Arg |
| 50         |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |     |
| Glu        | Cys | Pro | Ala | Ser | Gly | Gln | Ser | Glu | Pro | Arg | Asn | Gly | Gly | Thr | Asn |
| 65         |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |     |
| Glu        | Glu | Ser | Asn | Ser | Ser | Gly | Asn | Thr | Asn | Thr | Asp | Pro | Pro | Ala | Glu |
| 85         |     |     |     | 90  |     |     |     | 95  |     |     |     |     |     |     |     |
| Asp        | Ser | Gln | Lys | Ser | Ser | Gly | Ala | Asn | Gln | Ala | Lys | Thr | Asp |     |     |
| 100        |     |     |     | 105 |     |     |     | 110 |     |     |     |     |     |     |     |

```
<210> 5094
<211> 66
<212> PRT
<213> Homo sapiens
```

<400> 5094  
Thr Gly Pro Glu Phe Pro Gly Arg Pro Thr Arg Pro Gly Arg Ser Arg  
1 5 10 15  
Lys Ile Leu Thr His Lys Asn Phe Gly Leu Glu Ser Phe Pro Gly Val  
20 25 30

## 4586

Val Pro Ile Lys Thr Asp Leu Glu Arg Lys Pro Ala Gln His Gly Thr  
                   35                  40                  45

Cys Phe Leu Asn Ser Leu Glu Ser Val Trp Cys Met Ser Leu Leu Ile  
           50                  55                  60

Tyr Ser  
       65

&lt;210&gt; 5095

&lt;211&gt; 241

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5095

Ser Phe Ser Glu Met Ala Gly Val Ser Ala Cys Ile Lys Tyr Ser Met  
   1                  5                  10                  15

Phe Thr Phe Asn Phe Leu Phe Trp Leu Cys Gly Ile Leu Ile Leu Ala  
                   20                  25                  30

Leu Ala Ile Trp Val Arg Val Ser Asn Asp Ser Gln Ala Ile Phe Gly  
           35                  40                  45

Ser Glu Asp Val Gly Ser Ser Ser Tyr Val Ala Val Asp Ile Leu Ile  
       50                  55                  60

Ala Val Gly Ala Ile Ile Met Ile Leu Gly Phe Leu Gly Cys Cys Gly  
       65                  70                  75                  80

Ala Ile Lys Glu Ser Arg Cys Met Leu Leu Leu Phe Phe Ile Gly Leu  
                   85                  90                  95

Leu Leu Ile Leu Leu Leu Gln Val Ala Thr Gly Ile Leu Gly Ala Val  
           100                  105                  110

Phe Lys Ser Lys Ser Asp Arg Ile Val Asn Glu Thr Leu Tyr Glu Asn  
           115                  120                  125

Thr Lys Leu Leu Ser Ala Thr Gly Glu Ser Glu Lys Gln Phe Gln Glu  
       130                  135                  140

Ala Ile Ile Val Phe Gln Glu Glu Phe Lys Cys Cys Gly Leu Val Asn  
       145                  150                  155                  160

Gly Ala Ala Asp Trp Gly Asn Asn Phe Gln His Tyr Pro Glu Leu Cys  
                   165                  170                  175

Ala Cys Leu Asp Lys Gln Arg Pro Cys Gln Ser Tyr Asn Gly Lys Gln

## 4587

180 185 190  
 Val Tyr Lys Glu Thr Cys Ile Ser Phe Ile Lys Asp Phe Leu Ala Lys  
 195 200 205  
 Asn Leu Ile Ile Val Ile Gly Ile Ser Phe Gly Leu Ala Val Ile Glu  
 210 215 220  
 Ile Leu Gly Leu Val Phe Ser Met Val Leu Tyr Cys Gln Ile Gly Asn  
 225 230 235 240  
 Lys

&lt;210&gt; 5096

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5096

Gly Gly Phe Phe Ser Ile Ser Phe Lys Arg Cys Met Ser Glu Phe Pro  
 1 5 10 15  
 Leu His Thr Lys Asn Trp Ser Leu Glu Pro His Tyr Ser Leu Ser Gln  
 20 25 30  
 Val Leu Val Pro Tyr Thr Pro Glu Cys Gln Met Val Gly Ala Asp Trp  
 35 40 45  
 Lys Lys Glu Lys Ser Ser Ser Arg Cys Val Gly Ser His Pro Pro His  
 50 55 60  
 Ile Ala Ser Pro Ser Ser Glu Gln Trp Ala Trp Gly Arg Lys Leu Phe  
 65 70 75 80  
 Gln

&lt;210&gt; 5097

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5097

Arg Pro Gln Arg Leu Gly Arg Leu Gly Phe Pro Leu Pro Pro Arg Thr  
 1 5 10 15



## 4588

Pro Lys Asp Thr Pro Asn Pro Arg Pro Ala Gly Pro Ala Leu Ala Arg  
20 25 30

Pro Lys Tyr Tyr Leu Ala Gln Ala Ser Ala Arg Gly Thr Pro Lys Leu  
35 40 45

Pro Met Tyr Pro Ala Pro Glu Gly Leu His Ser Gln Glu Val Pro Met  
50 55 60

Tyr Pro Asn Thr Gly Arg His Pro Ala Pro Pro Ser Gln Thr Arg Lys  
65 70 75 80

Lys Val Asn Leu Thr Thr Thr Tyr Ser Pro Lys Thr Thr Tyr Phe Val  
85 90 95

Leu Ala Gly Leu Pro Ala Thr  
100

&lt;210&gt; 5098

&lt;211&gt; 143

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (32)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (44)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4589

&lt;221&gt; SITE

&lt;222&gt; (67)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5098

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Gly | Thr | Ser | Ser | Phe | Ala | Asn | His | Pro | Pro | Ala | Ala | Arg | Leu | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Asn | Lys | Glu | Arg | Glu | Glu | Ile | Gln | Thr | Leu | Lys | Gln | Gln | Xaa |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Xaa | Leu | Arg | Glu | Asp | Leu | Lys | Xaa | Xaa | Glu | Xaa | Lys | Trp | Ser | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | His | Ser | Arg | Leu | Arg | Ser | Gln | Ile | Gln | Met | Leu | Val | Arg | Glu | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Asp | Xaa | Arg | Glu | Glu | Ile | Lys | Val | Met | Glu | Arg | Phe | Arg | Leu | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Trp | Lys | Arg | Ala | Glu | Ala | Ile | Glu | Ser | Ser | Leu | Glu | Val | Glu | Lys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asp | Lys | Leu | Ala | Asn | Thr | Ser | Val | Arg | Phe | Gln | Asn | Ser | Gln | Ile |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Gly | Thr | Gln | Val | Glu | Lys | Tyr | Lys | Lys | Asn | Tyr | Leu | Pro | Met |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Gln | Gly | Lys | Arg | Leu | His | Asp | Leu | Phe | Ile | Lys | His | Phe | Arg | Met |  |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |  |

&lt;210&gt; 5099

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5099

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Met | Ile | Thr | Pro | Ser | Ser | Lys | Leu | Thr | Leu | Thr | Lys | Gly | Asn | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Trp | Ser | Ser | Thr | Ala | Val | Ala | Ala | Ala | Leu | Glu | Leu | Val | Asp | Pro |
|     |     |     |     | 20  |     |     | 25  |     |     |     |     |     | 30  |     |     |

## 4590

Pro Gly Cys Arg Asn Ser Ala Arg Gly Xaa Gly Asn Glu Tyr Ile His  
           35                                  40                                  45

Phe Ser Val Ile Lys Leu Leu Lys Val Asn Phe Asn Val Leu Ile Val  
           50                                  55                                  60

Phe Leu Met Cys Ala Ala Glu Met Ala Met Ser Leu Leu Asn Leu His  
           65                                  70                                  75                                  80

Leu Gln Leu Lys Gly Ser Phe Arg Arg Lys Tyr Lys Leu Ala Phe Ile  
                                   85                                  90                                  95

Leu Gln Thr Ile Val Phe Tyr Phe Ile Ile Leu Ile Cys Phe Val Thr  
                                   100                                  105                                  110

His Lys Lys Glu Thr Ile Pro Glu Leu  
           115                                  120

<210> 5100

<211> 42

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (5)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5100

Gln Xaa Glu Leu Xaa Leu Lys Lys Lys Lys Lys Ile Ile Cys Lys Ile  
       1                                  5                                  10                                  15

Asn Ser Gly Ile Val Val Leu Phe Lys Glu Met Phe Cys Lys Leu Ser  
                                   20                                  25                                  30

Ser His Tyr Ile Ile Phe Ile Val Leu Ser  
           35                                  40

<210> 5101

<211> 48

<212> PRT

<213> Homo sapiens

## 4591

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5101

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Tyr | His | Ser | Ser | His | Xaa | Asn | Ile | Pro | Phe | Asn | Leu | Leu | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gly | Tyr | Cys | Lys | Tyr | Glu | Ser | Ile | Tyr | Lys | Val | Asn | Cys | Tyr | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Cys | Ser | Glu | Lys | Tyr | Thr | Leu | Lys | Ile | Val | Ile | Val | Asn | Asn | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

&lt;210&gt; 5102

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5102

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Arg | Asn | Trp | Met | Phe | Gln | Lys | Leu | Leu | His | Leu | Leu | Gln | Met | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ile | Gln | Leu | Leu | Pro | Phe | Glu | Asn | Val | Gly | Glu | Met | Ser | Leu | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Met | Phe | Val | Cys | Lys | Asn | Val | Ser | Val | Cys | Asn | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |

&lt;210&gt; 5103

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5103

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Trp | Gly | Pro | Pro | Val | Pro | Ser | Trp | Ala | Ala | Glu | Gly | Gly | Ala | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Pro | Arg | Phe | Leu | Ser | Leu | Leu | Lys | Ser | Leu | Glu | Gln | Thr | Val | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | His | Pro | Leu | Leu | Phe | Lys | Lys | Asn | Phe | Phe | Ser | Arg | Lys | Lys |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4592

35 40 45  
 Met Leu Ser Val Cys Trp Gly Lys Phe  
 50 55  
  
 <210> 5104  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (26)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5104  
 Gly Lys Leu Val Arg Leu Gln Val Pro Val Arg Asn Ser Arg Val Asp  
 1 5 10 15  
 Pro Arg Val Arg Ser Leu Asp Ser Asn Xaa Leu Ser Ile Asn Phe Ser  
 20 25 30  
 Pro Gln Thr Thr Val Asn Phe Tyr Phe Leu Ser Ala Glu Ile Phe His  
 35 40 45  
 Arg Trp Lys Leu Met Phe Gln Phe  
 50 55  
  
 <210> 5105  
 <211> 370  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5105  
 Lys Gly Arg Ser Ser Glu Ser Thr Thr Pro Leu Asn Val Ser Arg Glu  
 1 5 10 15  
 Thr Leu Gln Gln His Lys Leu Leu Lys Val Ile Arg Lys Lys Leu Val  
 20 25 30  
 Arg Lys Thr Leu Asp Met Ile Lys Lys Ile Ala Asp Asp Lys Tyr Asn  
 35 40 45  
 Asp Thr Phe Trp Lys Glu Phe Gly Thr Asn Ile Lys Leu Gly Val Ile  
 50 55 60  
 Glu Asp His Ser Asn Arg Thr Arg Leu Ala Lys Leu Leu Arg Phe Gln

## 4593

|   |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |
| Ser Ser His His Pro Thr Asp Ile Thr Ser Leu Asp Gln Tyr Val Glu |     |     |     |     |     |     |
|   |     | 85  |     | 90  |     | 95  |
| Arg Met Lys Glu Lys Gln Asp Lys Ile Tyr Phe Met Ala Gly Ser Ser |     |     |     |     |     |     |
|   | 100 |     | 105 |     | 110 |     |
| Arg Lys Glu Ala Glu Ser Ser Pro Phe Val Glu Arg Leu Leu Lys Lys |     |     |     |     |     |     |
|   | 115 |     | 120 |     | 125 |     |
| Gly Tyr Glu Val Ile Tyr Leu Thr Glu Pro Val Asp Glu Tyr Cys Ile |     |     |     |     |     |     |
|   | 130 |     | 135 |     | 140 |     |
| Gln Ala Leu Pro Glu Phe Asp Gly Lys Arg Phe Gln Asn Val Ala Lys |     |     |     |     |     |     |
|   | 145 |     | 150 |     | 155 | 160 |
| Glu Gly Val Lys Phe Asp Glu Ser Glu Lys Thr Lys Glu Ser Arg Glu |     |     |     |     |     |     |
|   |     | 165 |     | 170 |     | 175 |
| Ala Val Glu Lys Glu Phe Glu Pro Leu Leu Asn Trp Met Lys Asp Lys |     |     |     |     |     |     |
|   |     | 180 |     | 185 |     | 190 |
| Ala Leu Lys Asp Lys Ile Glu Lys Ala Val Val Ser Gln Arg Leu Thr |     |     |     |     |     |     |
|   | 195 |     | 200 |     | 205 |     |
| Glu Ser Pro Cys Ala Leu Val Ala Ser Gln Tyr Gly Trp Ser Gly Asn |     |     |     |     |     |     |
|   | 210 |     | 215 |     | 220 |     |
| Met Glu Arg Ile Met Lys Ala Gln Ala Tyr Gln Thr Gly Lys Asp Ile |     |     |     |     |     |     |
|   | 225 |     | 230 |     | 235 | 240 |
| Ser Thr Asn Tyr Tyr Ala Ser Gln Lys Lys Thr Phe Glu Ile Asn Pro |     |     |     |     |     |     |
|   |     | 245 |     | 250 |     | 255 |
| Arg His Pro Leu Ile Arg Asp Met Leu Arg Arg Ile Lys Glu Asp Glu |     |     |     |     |     |     |
|   |     | 260 |     | 265 |     | 270 |
| Asp Asp Lys Thr Val Leu Asp Leu Ala Val Val Leu Phe Glu Thr Ala |     |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |     |
| Thr Leu Arg Ser Gly Tyr Leu Leu Pro Asp Thr Lys Ala Tyr Gly Asp |     |     |     |     |     |     |
|   | 290 |     | 295 |     | 300 |     |
| Arg Ile Glu Arg Met Leu Arg Leu Ser Leu Asn Ile Asp Pro Asp Ala |     |     |     |     |     |     |
|   | 305 |     | 310 |     | 315 | 320 |
| Lys Val Glu Glu Glu Pro Glu Glu Glu Pro Glu Glu Thr Ala Glu Asp |     |     |     |     |     |     |
|   |     | 325 |     | 330 |     | 335 |
| Thr Thr Glu Asp Thr Glu Gln Asp Glu Asp Glu Glu Met Asp Val Gly |     |     |     |     |     |     |

4594

340 345 350

Thr Asp Glu Glu Glu Glu Thr Ala Lys Glu Ser Thr Ala Glu Lys Asp

355 360 365

Glu Leu

370

```
<210> 5106
<211> 64
<212> PRT
<213> Homo sapiens
```

```

<400> 5106
Ile Ile Ile Ile Lys Lys Ile Asn Ala Met Gln Leu Gly Met Ala Asn
  1                      5                      10                      15
Val Asn Ala Tyr Leu Tyr Gln Arg Leu Thr Leu Ser Ser Gly Leu Ser
          20                      25                      30
Leu Val Asp Tyr Pro Trp Gln Thr Leu Asn Glu Gln Arg Glu Ala Thr
          35                      40                      45
Met Leu Lys Asp Lys Ser Pro Leu Ser Ser Tyr Tyr Arg Asn Asn Val
  50                      55                      60

```

```
<210> 5107
<211> 64
<212> PRT
<213> Homo sapiens
```

```
<220>
<221> SITE
<222> (1)
<223> Xaa equals any of the naturally occurring L-amino acids
```

```
<220>
<221> SITE
<222> (58)
<223> Xaa equals any of the naturally occurring L-amino acids
```

<400> 5107  
Xaa Gln Ala Thr Ala Ile Asn Thr Asp Val Asn Gly Cys Ile Cys Phe  
1 5 10 15

## 4595

Ala Val Val Thr Gly Leu Gly Arg Phe Gly Ile Cys Glu Arg Ile Asp  
                   20                  25                  30

Ser Phe Ser Lys Leu Phe His Lys Val Lys Lys Leu His Phe Lys Gly  
           35                  40                  45

Asn Arg Ser Tyr Ser Ser Leu Lys Ser Xaa Ser Asn Cys Ser Phe Ile  
       50                  55                  60

<210> 5108

<211> 98

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (9)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (35)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (93)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5108

Val Glu Pro Arg His Ser Ser Ala Xaa Asn Leu His Ser Leu Ser Ile  
       1                  5                  10                  15

Ser His Ser Pro Ser Leu Phe Pro Leu Trp Pro His Trp His Pro Gly  
           20                  25                  30

Thr Phe Xaa Pro Xaa Gly Leu Cys Thr Tyr Cys Ser Asn Ser Leu Glu  
       35                  40                  45

Cys Pro His Ser His Thr Lys Ser Leu Ala Ser Phe Thr Ala Leu Leu



## 4596

50                                      55                                      60  
 Lys Ser His Leu Leu Ser Glu Ala Phe Pro Asp His Pro Ala Thr Asn  
 65                                      70                                      75                                      80  
 Ser Pro Ser Leu Cys Asn Ile Ala Gly Phe Phe Leu Xaa Ala Phe Ile  
                                     85                                      90                                      95  
 Ile Ser

<210> 5109  
 <211> 15  
 <212> PRT  
 <213> Homo sapiens

<400> 5109  
 Val Glu Thr Gly Phe Ile Met Leu Cys Arg Leu Leu Ser Asn Ser  
 1                                      5                                      10                                      15

<210> 5110  
 <211> 144  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (96)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (124)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (130)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (132)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5110  
 Glu Lys Pro Phe Ser Ser Phe Thr Ser Met Lys Ser Ser Asp Val Phe

## 4597

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ser Ser Lys Gly Met Thr Arg Trp Gly Glu Phe Asp Asp Leu Tyr Arg | 20  | 25  | 30  |
| Ile Ser Glu Leu Asp Arg Thr Gln Ile Pro Met Ser Glu Lys Arg Asn | 35  | 40  | 45  |
| Ser Gln Glu Asp Tyr Leu Ser Tyr His Ser Asn Thr Leu Lys Pro His | 50  | 55  | 60  |
| Ala Lys Asp Glu Pro Asp Ser Pro Val Leu Tyr Arg Thr Met Ser Glu | 65  | 70  | 75  |
| Ala Ala Leu Val Arg Lys Arg Met Lys Pro Leu Met Met Asp Arg Xaa | 85  | 90  | 95  |
| Glu Arg Gln Lys Asn Arg Ala Ser Ile Asn Gly His Phe Tyr Asn His | 100 | 105 | 110 |
| Glu Thr Ser Ile Phe Ile Pro Ala Phe Glu Ser Xaa Thr Lys Val Arg | 115 | 120 | 125 |
| Val Xaa Ser Xaa Met Arg Thr Glu Glu Val Ile Lys Gln Leu Leu Gln | 130 | 135 | 140 |

&lt;210&gt; 5111

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5111

|   |    |    |    |    |
|---|----|----|----|----|
| Arg Phe Phe Ile Ile Val Pro Lys Thr Asn Thr Leu Gln Val Val Leu | 1  | 5  | 10 | 15 |
| Glu Arg His His Phe Cys Gly Met Phe Trp Leu Gly Glu Gly Val Thr | 20 | 25 | 30 |    |
| Val Pro Thr Pro Pro Thr Ser Tyr Ala Ser Ala Leu Arg Arg Trp Leu | 35 | 40 | 45 |    |
| Phe Ile Gln Thr Trp Thr Tyr Ser Leu Pro Arg Ala Asp Glu Met Leu | 50 | 55 | 60 |    |
| Asn Phe Leu Trp Gly His Ser Leu Ile Val Pro Ala Ala Ala Thr Gly | 65 | 70 | 75 | 80 |

4598

Ala Ser Leu Glu Ala Ala Cys Ala Lys Thr Thr Gln Leu Ser Leu Gly  
85 90 95

Ser His Pro Arg Ala Phe Phe Ala Ser Arg Ser Gly Asp Leu Leu Gln  
100 105 110

<210> 5112

<211> 92

<212> PRT

<213> Homo sapiens

<400> 5112

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ile | Tyr | Trp | Glu | Thr | Asp | Tyr | Asn | His | Ser | Gly | Thr | Ile | Asp | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| His | Glu | Met | Arg | Thr | Ala | Leu | Arg | Lys | Ala | Gly | Phe | Thr | Leu | Asn | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Val | Gln | Gln | Thr | Ile | Ala | Leu | Arg | Tyr | Ala | Cys | Ser | Lys | Leu | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ile | Asn | Phe | Asp | Ser | Phe | Val | Ala | Cys | Met | Ile | Arg | Leu | Glu | Thr | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Phe | Lys | Leu | Phe | Ser | Leu | Leu | Asp | Glu | Asp | Lys | Asp | Gly | Met | Val | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Leu | Ser | Leu | Ala | Glu | Trp | Leu | Cys | Cys | Val | Leu | Val |     |     |     |     |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     |     |     |     |

<210> 5113

<211> 27

<212> PRT

<213> Homo sapiens

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5113

Asn Pro Val Ser Thr Lys Asn Thr Lys Ile Ser Trp Thr Trp Trp Trp  
1 5 10 15

## 4599

Ala Pro Val Val Pro Ala Thr Gln Xaa Gly Glu  
                   20                                  25

<210> 5114

<211> 333

<212> PRT

<213> Homo sapiens

<400> 5114

Arg Pro Arg Val Arg Glu Asn Leu Pro Leu Trp Gln His Ile Ser Phe  
   1                                  5                                  10                                  15

Gln Ala Leu Pro Pro Glu Leu Arg Glu Gln Thr Val His Glu Val Thr  
                   20                                  25                                  30

Thr Val Gly Thr Ala Glu Cys Arg Lys Trp Leu Ser Arg Ser Arg Thr  
                   35                                  40                                  45

Leu Gly Glu Leu Glu Ser Leu Asn Thr Val Leu Ser Ala Leu Leu Ala  
                   50                                  55                                  60

Val Cys Asn Ser Ala Gly Glu Ala Leu Asp Thr Gly Lys Gln Thr Ala  
   65                                  70                                  75                                  80

Ile Ile Glu Val Val Ser Gln Leu Trp Ala Phe Leu Asn Ile Lys Gln  
                                   85                                  90                                  95

Val Ala Asp Gln Pro Tyr Val Gln Gln Thr Phe Ser Leu Leu Leu Pro  
                   100                                  105                                  110

Leu Leu Gly Phe Phe Ile Gln Thr Leu Asp Pro Lys Leu Ile Leu Gln  
                   115                                  120                                  125

Ala Val Thr Leu Gln Thr Ser Leu Leu Lys Leu Glu Leu Pro Asp Tyr  
                   130                                  135                                  140

Val Arg Leu Ala Met Leu Asp Phe Val Ser Ser Leu Gly Lys Leu Phe  
   145                                  150                                  155                                  160

Ile Pro Glu Ala Ile Gln Asp Arg Ile Leu Pro Asn Leu Ser Cys Met  
                                   165                                  170                                  175

Phe Ala Leu Leu Leu Ala Asp Arg Ser Trp Leu Leu Glu Gln His Thr  
                   180                                  185                                  190

Leu Glu Ala Phe Thr Gln Phe Ala Glu Gly Thr Asn His Glu Glu Ile  
                   195                                  200                                  205

## 4600

Val Pro Gln Cys Leu Ser Ser Glu Glu Thr Lys Asn Lys Val Val Ser  
 210 215 220

Phe Leu Glu Lys Thr Gly Phe Val Asp Glu Thr Glu Ala Ala Lys Val  
 225 230 235 240

Glu Arg Val Lys Gln Glu Lys Gly Ile Phe Trp Glu Pro Phe Ala Asn  
 245 250 255

Val Thr Val Glu Glu Ala Lys Arg Ser Ser Leu Gln Pro Tyr Ala Lys  
 260 265 270

Arg Ala Arg Gln Glu Phe Pro Trp Glu Glu Glu Tyr Arg Ser Ala Leu  
 275 280 285

His Thr Ile Ala Gly Ala Leu Glu Ala Thr Glu Ser Leu Leu Gln Lys  
 290 295 300

Gly Pro Ala Pro Ala Trp Leu Ser Met Glu Met Glu Ala Leu Gln Glu  
 305 310 315 320

Arg Met Asp Lys Leu Lys Arg Tyr Ile His Thr Leu Gly  
 325 330

<210> 5115

<211> 48

<212> PRT

<213> Homo sapiens

<400> 5115

Glu Gln Gln Leu Arg Arg Gly Gly Arg Val Gly Gly Gln Pro Tyr Val  
 1 5 10 15

Trp Ser Thr Gln Arg Pro Ala Ile Pro Ile Ser Val Leu Leu Ser Ile  
 20 25 30

Ser Ser Glu Asp Leu Ser Glu Asn Arg Ala Gly Met Arg Ser Gln Thr  
 35 40 45

<210> 5116

<211> 40

<212> PRT

<213> Homo sapiens

## 4601

&lt;400&gt; 5116

Asn Pro Ile Ser Thr Lys Asn Ala Lys Ile Ser His Val Trp Cys Tyr  
1 5 10 15

Ala Pro Val Val Pro Ala Thr Leu Glu Ala Glu Ala Gly Glu Ser Leu  
20 25 30

Glu Pro Arg Arg Arg Arg Leu Trp  
35 40

&lt;210&gt; 5117

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5117

Asn His Leu Ile Cys Lys Leu Glu Trp Ala Leu Glu Asn His Thr Val  
1 5 10 15

Phe Leu Ser His Phe Thr Gly Lys Ile Thr Asp Val Ser Ile Cys Asp  
20 25 30

&lt;210&gt; 5118

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5118

Asn Phe Ile Ala Leu Ser Ser Tyr Ile Ile Lys Glu Asp Lys Pro Gln  
1 5 10 15

&lt;210&gt; 5119

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

## 4602

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5119

```

Pro Leu Pro His Ala Asp Leu Gln Gln Val Ala Gln Xaa Glu Pro Asn
 1             5             10             15

Asn Ala Tyr Asp Glu Glu Asp Cys Val Glu Met Val Ala Ser Gly Gly
          20             25             30

Trp Asn Asp Val Ala Cys His Thr Thr Met Tyr Phe Met Cys Glu Phe
          35             40             45

Asp Lys Glu Asn Met
          50

```

<210> 5120

<211> 61

<212> PRT

<213> Homo sapiens

<400> 5120

```

Ser Leu Asp Ile His Lys Glu Arg Arg Tyr Ser Asp Glu Gly Asp His
 1             5             10             15

Asn Ser Val Val Leu Met Ile Leu Asp Tyr Asn Leu Phe Leu Phe Ile
          20             25             30

Phe His Ser Phe Phe Lys Asn Met Asp Cys Ile Leu Ser Thr Thr Ile
          35             40             45

Ser Gln Ile Pro Lys Ile Val Leu Thr Phe Ser Asp Tyr
          50             55             60

```

<210> 5121

<211> 189

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (33)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (97)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4603

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (167)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (178)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5121

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asn | Asn | Thr | Val | Leu | Val | Glu | Gly | Cys | Phe | Cys | Pro | Glu | Gly | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Tyr | Ala | Pro | Gly | Phe | Asp | Val | Cys | Val | Lys | Thr | Cys | Gly | Cys |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Gly | Pro | Asp | Asn | Val | Pro | Arg | Glu | Phe | Gly | Glu | His | Phe | Glu | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Cys | Lys | Asn | Cys | Val | Cys | Leu | Glu | Gly | Gly | Ser | Gly | Ile | Ile | Cys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Pro | Lys | Arg | Cys | Ser | Gln | Lys | Pro | Val | Thr | His | Cys | Val | Glu | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Thr | Tyr | Leu | Ala | Thr | Glu | Val | Asn | Pro | Ala | Asp | Thr | Cys | Cys | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Thr | Val | Cys | Lys | Cys | Gln | His | Gln | Pro | Val | Gln | Arg | Glu | Ala | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Pro | Ala | Gly | Asn | Ser | Lys | Trp | Lys | Ser | Lys | Met | Val | Pro | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Cys | Pro | Phe | Tyr | Trp | Cys | Glu | Val | Gln | Gly | Gly | Val | Cys | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Met | Leu | Ser | Thr | Ser | Pro | Val | Leu | Pro | Val | Tyr | Ser | Ser | Lys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Pro | Gly | Leu | Ala | Cys | Xaa | Lys | Gly | Gln | Gly | Gly | Thr | Thr | Thr | Thr |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Xaa | Gln | Arg | Ser | Leu | Ala | Trp | Gln | Pro | Thr | Gly | Gly |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     |

&lt;210&gt; 5122



## 4604

&lt;211&gt; 225

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5122

Glu Ala Ser Ser Pro Thr Phe Ser Lys Glu Pro Met Lys Val Gln Asp  
 1 5 10 15

Ser Val Leu Ile Lys Ala Asp Asn Thr Ile Glu Gly Asp Asn Asn Glu  
 20 25 30

Gln Asn Tyr Ile Lys Asp Val Lys Leu Glu Asp His Leu Leu Ala Gly  
 35 40 45

Ser Cys Leu Lys Gln Ser Ser Lys Asn Ile Phe Thr Glu Arg Ala Glu  
 50 55 60

Asp Gln Ile Lys Ile Ser Thr Arg Lys Gln Lys Ser Val Lys Glu Ile  
 65 70 75 80

Ser Ser Tyr Thr Pro Lys Asp Cys Thr Ser Arg Asn Gly Pro Glu Arg  
 85 90 95

Gly Cys Asp Arg Gly Ile Ile Val Ser Thr Arg Leu Leu Thr Asp Ser  
 100 105 110

Ser Thr Asp Ala Leu Glu Lys Val Ser Thr Ser Asn Glu Asp Phe Ser  
 115 120 125

Leu Lys Asp Asp Ala Leu Ala Lys Thr Ser Lys Arg Lys Thr Lys Val  
 130 135 140

Gln Lys Asp Glu Ile Cys Ala Lys Leu Ser His Val Ile Lys Lys Gln  
 145 150 155 160

His Arg Lys Ser Thr Leu Val Asp Asn Thr Ile Asn Leu Asp Glu Asn  
 165 170 175

Leu Thr Val Ser Asn Ile Glu Ser Phe Tyr Ser Arg Lys Asp Thr Gly  
 180 185 190

Val Gln Lys Gly Asp Gly Phe Ile His Asn Leu Ser Leu Asp Pro Ser  
 195 200 205

Gly Val Leu Asp Asp Lys Asn Gly Glu Gln Lys Ser Gln Asn Asn Val  
 210 215 220

Leu  
 225

## 4605

&lt;210&gt; 5123

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (22)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (27)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5123

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gln | Lys | Gly | Ser | Arg | Glu | Trp | Gly | Ser | Lys | Asn | Gly | Ser | Arg | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Met | Arg | Ser | Gln | Xaa | Lys | Trp | Cys | Phe | Xaa | Gly | Gly | His | Lys | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Val | Ile | Asp | Phe |
|     |     |     | 35  |     |     |

&lt;210&gt; 5124

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5124

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Gln | Thr | Ile | Trp | Arg | Ser | Ile | Arg | Gly | Leu | Thr | Gly | His | Ile | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gln | Pro | His | Phe | Ser | Ser | Ser | Ser | Met | Arg | Lys | Trp | Met | Ile | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | His | Met | Ser | Leu | Gly | Glu | Arg | Leu | Pro | Val | Pro | Leu | Lys | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ile | Leu | Leu | Glu | Thr | Glu | Ala | Ser | Arg | Trp | Leu | Trp | Gln | Leu | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Lys | Met | Leu | Cys | Ala |
|     | 65  |     |     |     | 70  |     |

## 4606

&lt;210&gt; 5125

&lt;211&gt; 184

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (44)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (181)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (184)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5125

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Arg | Val | Gln | Gln | Glu | Ile | Asp | Asp | Val | Ile | Gly | Gln | Val | Arg | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Met | Gly | Asp | Gln | Ala | His | Met | Pro | Tyr | Thr | Thr | Ala | Val | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Glu | Val | Gln | Arg | Phe | Gly | Asp | Ile | Val | Pro | Xaa | Gly | Val | Thr | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Ser | Arg | Asp | Ile | Glu | Val | Gln | Gly | Phe | Arg | Ile | Pro | Lys | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Thr | Leu | Ile | Thr | Asn | Leu | Ser | Ser | Val | Leu | Lys | Asp | Glu | Ala | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Glu | Lys | Pro | Phe | Arg | Phe | His | Pro | Glu | His | Phe | Leu | Asp | Ala | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | His | Phe | Val | Lys | Pro | Glu | Ala | Phe | Leu | Pro | Phe | Ser | Ala | Gly | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Cys | Leu | Gly | Glu | Pro | Leu | Ala | Arg | Met | Glu | Leu | Phe | Leu | Phe |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Thr | Ser | Leu | Leu | Gln | His | Phe | Ser | Phe | Ser | Val | Pro | Thr | Gly | Gln |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Pro | Ser | His | His | Gly | Val | Phe | Ala | Phe | Leu | Val | Ser | Pro | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

## 4607

Pro Tyr Glu Leu Cys Ala Val Pro Arg Arg Met Gly Tyr Leu Val Pro  
                           165                          170                          175

Ser Leu Leu Pro Xaa Gln Arg Xaa  
                           180

<210> 5126

<211> 84

<212> PRT

<213> Homo sapiens

<400> 5126

Ala Gln Val Ser Phe Ser Pro Trp Met Ala Ser Ala Ala Pro Gly Arg  
   1                          5                          10                          15

Pro His Leu Val Leu Tyr Cys Glu Ser Leu Ala Thr Gln Val Arg Ser  
                           20                          25                          30

Gly Pro Gly Pro Arg Met Ala Ser Val Ala Arg Lys Tyr Ala Lys Glu  
                           35                          40                          45

Glu Val Asn Pro Ile Ala Gly Leu Glu Asp Ser Asp Gln Thr Thr Arg  
                           50                          55                          60

Gly Leu Leu Asn Lys Gly Arg Arg Cys Pro Cys Leu Met Gly Leu Ala  
   65                          70                          75                          80

Trp Gly Gly Gly

<210> 5127

<211> 124

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (10)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (22)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5127

Arg Pro Pro Thr Thr Thr Lys Phe Ala Xaa Ala Arg Gln Met Ala Gly

## 4608

1                      5                      10                      15  
 Lys Gln Ala Val Ser Xaa Ser Gly Lys Trp Leu Asp Gly Ile Arg Lys  
                          20                      25                      30  
 Trp Tyr Tyr Asn Ala Ala Gly Phe Asn Lys Leu Gly Leu Met Arg Asp  
                          35                      40                      45  
 Asp Thr Ile Tyr Glu Asp Glu Asp Val Lys Glu Ala Ile Arg Arg Leu  
                          50                      55                      60  
 Pro Glu Asn Leu Tyr Asn Asp Arg Met Phe Arg Ile Lys Arg Ala Leu  
                          65                      70                      75                      80  
 Asp Leu Asn Leu Lys His Gln Ile Leu Pro Lys Glu Gln Trp Thr Lys  
    85                      90                      95  
 Tyr Glu Glu Glu Asn Phe Tyr Leu Glu Pro Tyr Leu Lys Glu Val Ile  
    100                      105                      110  
 Arg Glu Arg Lys Glu Arg Glu Glu Trp Ala Lys Lys  
    115                      120

&lt;210&gt; 5128

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5128

Tyr Gln Leu Gln Ala Gly Arg Glu Ser Leu Gln His Gly Pro Lys Met  
                          1                      5                      10                      15  
 Leu Ser Leu Gln Thr Gly Glu Gly Gln Val Gly Ser His Ser Ser Glu  
    20                      25                      30  
 Ser Leu Tyr Tyr Thr Ile Glu Ser Tyr Val Phe Ser Arg Phe Gly Val  
    35                      40                      45  
 Glu Ala Ile His Ile Tyr Glu Glu Ser Gln Ala Gln Glu Gln  
    50                      55                      60

&lt;210&gt; 5129

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 4609

&lt;221&gt; SITE

&lt;222&gt; (23)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5129

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Lys | Trp | Val | Pro | Gln | Asn | Leu | Val | Val | Ile | Leu | Leu | Gly | Ile | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gln | Tyr | Ile | Ala | Leu | Xaa | Ser | Ser | Pro | Thr | Phe | Ser | Pro | Leu | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | His | Leu | His | Phe | Leu | Ser | Ser | Pro | Asn | Trp | Glu | Asn | Met | Gln | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

Leu

&lt;210&gt; 5130

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5130

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Asn | Lys | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Val | Xaa | Phe | Ile | Thr | Asn | Ile | Asn | Ile | Ile | Phe | Leu | Leu | Phe | Ile |
|     |     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Ala | Ser | Phe | Tyr | Thr | Phe | Thr | His | Thr | Lys | Asn | Ile | Lys | Asn |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Asn | Tyr | Ser | Ile | Leu | Val | Glu | Phe | Ser | Leu | Lys |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |

&lt;210&gt; 5131

&lt;211&gt; 58

## 4610

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5131

Ile Tyr Val Lys His Lys Pro Leu Ile Phe Leu Lys Lys Ser Arg Leu  
 1 5 10 15

Leu Phe Phe His Ile Ile Ser Glu Pro Phe Ser Ser Phe Ala Cys Pro  
 20 25 30

Leu Leu Gln Asn His Thr Asp Phe Val Leu His Phe Ile His His Leu  
 35 40 45

Leu Lys Cys Pro Leu Lys Cys Asn Gly Ile  
 50 55

&lt;210&gt; 5132

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5132

Asn Ala Lys Ser Gln Met Tyr Leu Ser Met Asn Phe Asp Ala Cys Thr  
 1 5 10 15

His Leu Tyr Asn Ser Asn His Tyr Xaa Asp Val Glu His Asp His His  
 20 25 30

Thr Arg Gly Pro Pro Ala Pro Ser Gln Leu Ile Leu Ile Ser Thr Pro  
 35 40 45

Glu Ser Asn His Ser Ser Asp Phe Phe His His Arg Leu Val  
 50 55 60

&lt;210&gt; 5133

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5133

Arg Lys Pro Leu Trp Cys Leu Asn Asp Lys Tyr Ala Asp Ala Thr Leu  
 1 5 10 15

## 4611

Leu Cys Leu Met Tyr Gly Ala Leu Gly Gln Leu Phe Asn Ile Lys Gln  
                   20                                  25                                  30  
 Leu Arg Thr Cys Phe Arg Lys Cys Cys Ser Phe Ala Leu His Ala Lys  
                   35                                  40                                  45  
 Val Leu Gly Lys Lys Leu Thr Ile Cys Lys Asn Ile Asp Ala Gln Ala  
                   50                                  55                                  60  
 His Lys Glu Phe Ile Leu  
                   65                                  70

&lt;210&gt; 5134

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5134

Lys Leu Pro Asn Phe Tyr Gln Leu Glu Gly His Pro Trp Val Phe Val  
           1                                  5                                  10                                  15  
 Arg Ser Tyr Leu Met Ser Leu Cys Leu Gly Asp Ser Ala Gly Trp Ser  
                   20                                  25                                  30  
 Leu Gly Pro Gly Gly Pro Ser Pro Gly Val Cys Arg Trp Thr Arg Ser  
                   35                                  40                                  45  
 Pro Thr Gly Asp Ile Asn Leu Arg Val Ala Ser Leu Glu Thr Gly Thr  
                   50                                  55                                  60  
 Trp Ala Ala Leu Phe Pro Ser Pro Leu Leu Arg Gly Leu Gly Arg Cys  
           65                                  70                                  75                                  80  
 Cys Phe His Ala Ala Ser Thr Ile Thr Leu Gly Phe Leu Asp Gly Lys  
                                   85                                  90                                  95

&lt;210&gt; 5135

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5135

His Asp Leu Gly Ser Leu Gln Pro Leu Pro Pro Gly Phe Lys Arg Phe



## 4612

|   |    |    |    |
|---|----|----|----|
| 1   | 5  | 10 | 15 |
| Ser Cys Leu Ser Leu Pro Ser Ser Trp Asp Tyr Arg Arg Pro Pro Ser |    |    |    |
|   | 20 | 25 | 30 |
| Arg Pro Gly Asn Phe Phe Val Leu Leu Val Glu Thr Val Ile His Tyr |    |    |    |
|   | 35 | 40 | 45 |
| Val Gly Gln Ala Ser His Glu Leu Leu Thr Ser                     |    |    |    |
|   | 50 | 55 |    |

&lt;210&gt; 5136

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (11)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5136

|   |    |    |    |
|---|----|----|----|
| Gly Phe Ile Gln Arg Ser Asn Phe Leu Xaa Xaa Gln Lys Ile His Thr |    |    |    |
| 1   | 5  | 10 | 15 |
| Glu Glu Lys Leu Tyr Glu Cys Ser Gln Tyr Gly Arg Asp Phe Asn Ser |    |    |    |
|   | 20 | 25 | 30 |
| Thr Thr Asn Val Lys Asn Asn Gln Arg Val His Gln Glu Gly Leu Ser |    |    |    |
|   | 35 | 40 | 45 |
| Leu Ser Lys Ala Pro Ile His Leu Gly Glu Arg Ser Val Asp Lys Gly |    |    |    |
|   | 50 | 55 | 60 |
| Glu His Thr Gly Asn Leu   |    |    |    |
|   | 65 | 70 |    |

&lt;210&gt; 5137

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4613

&lt;400&gt; 5137

```

Pro Val Ser Phe Tyr Leu Pro Leu Pro Phe Trp Met Lys Met Leu Ile
 1             5             10             15

Val Gly His Phe Leu Ala Arg Thr Ala Leu Val Pro Leu Thr His Lys
             20             25             30

Thr Arg Leu Leu Ser Phe Ile Asp Thr Ser Ile Lys Lys Arg Phe Lys
             35             40             45

Asp Arg Ala Arg Trp Leu Thr Pro Val Ile Pro Ala Leu Trp Glu Ala
             50             55             60

Glu Ala Gly Gly Ser Pro Glu Val Gly Ser Ser Arg Pro Ala
65             70             75

```

&lt;210&gt; 5138

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5138

```

Ile Pro Arg Leu Leu Cys Ser Thr Gly Gln Thr Ser Trp Ser Ile Cys
 1             5             10             15

Val Gly Glu Thr Trp Glu Lys Ala Lys Thr Met Cys Glu Cys Tyr Asp
             20             25             30

Tyr Leu Phe Asp Ile Ala Val Ser Met Lys Lys Val Gly Leu Asp Pro
             35             40             45

Ser Gln Leu Pro Val Gly Glu Asn Gly Ile Val
             50             55

```

&lt;210&gt; 5139

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5139

```

Asp Phe Phe Ser Leu Tyr Phe His Pro Thr Asn His Leu Glu Ser Gly
 1             5             10             15

Ile Lys Gly Ile Asn Gln Glu Lys Thr Glu Gly Gln Glu Thr Glu Pro
             20             25             30

Asn Lys Gly Asp Pro Ser Gln Gly Ala Trp Glu Ser Ala Gly Leu Asp

```

## 4614

35

40

45

Ala Pro Pro Ser Ser Ala Ser Tyr  
 50 55

&lt;210&gt; 5140

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (70)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5140

Thr Gly Leu Glu Thr Leu Gly Ser Gln His Leu Tyr Phe Leu Val Arg  
 1 5 10 15

Lys Trp Ala Trp Arg Cys Trp Glu Ile Lys Arg Gly Val Gly Glu Asp  
 20 25 30

Pro Val Ser Val Ser Ser Cys Val Val Asp Val Asn Leu Ala Val Asn  
 35 40 45

Val Ala Gly Cys Val Ser Cys Leu Leu Ser Asn Cys Trp Leu Pro Arg  
 50 55 60

His Ser Val Leu Leu Xaa Phe Ser Glu Phe His  
 65 70 75

&lt;210&gt; 5141

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5141

His Ala Ser Ser Leu Gly Asp Arg Val Arg Leu Phe Leu Lys Ile Lys  
 1 5 10 15

Thr Lys Asn Lys Phe Leu Leu Glu Val Gly Trp Arg Trp Gly Ala Arg  
 20 25 30

Ile

## 4615

&lt;210&gt; 5142

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5142

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Tyr | Ser | Lys | Val | Trp | Leu | Pro | Phe | Arg | Ser | Leu | Gly | Gly | Ala | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Ser | Phe | Ser | Asn | Arg | Ala | Thr | Phe | Tyr | Phe | Leu | Ile | Glu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Asn | Phe | Tyr | Phe | Leu | Ile | Gly | Xaa |
|     |     | 35  |     |     |     |     | 40  |     |     |

&lt;210&gt; 5143

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5143

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Pro | Glu | Leu | Pro | Pro | Leu | Gln | Val | Gln | Met | His | Arg | Cys | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Pro | Ser | Val | Ser | Ser | Gln | Gly | Cys | Lys | Arg | Arg | Thr | His | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Gln | Pro | Glu | Pro | Gly | Thr | Gly | Cys | Ala | Lys | Glu | His | Cys | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Val | Glu | Glu | Arg | Gly | Leu | Pro | Cys | Thr | Gln | Asp | Val | Glu | Ser | Leu |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Ser | Glu | Gln | Lys | Ile | Lys | Asn | Lys | Ser | Leu | Leu | Lys | Gly | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Gly | Gln | Val | Cys | Phe | Ser | Leu | Glu | Gln | Cys | Phe | Ala | Leu | Glu | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Lys | Ile | Tyr | Val | Met | Thr | Gln | Tyr | Ile | Cys | Val | Arg | Thr | Tyr | Met |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Ile | Gly | Ile | Lys | Cys | Leu |
|-----|-----|-----|-----|-----|-----|

## 4616

115

&lt;210&gt; 5144

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5144

Ser Gln Lys Gly Arg Val Ile Ile Lys Glu Glu Ser Asp Gln Glu Ser  
1 5 10 15

Lys Ile Asp Arg Glu Ser Arg Leu Leu Glu Lys Trp Glu Asn Tyr Arg  
20 25 30

Thr Asp Ser Ala Arg Arg Arg Gln Ala Gly Glu Glu Arg Pro Ser Gln  
35 40 45

Ser Ser Thr Cys Ala Asn Arg Lys Cys Val Arg Gly Phe Leu Glu Leu  
50 55 60

Thr Gly Ala Gly Asp His  
65 70

&lt;210&gt; 5145

&lt;211&gt; 43

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (35)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5145

Val Met Asn Ile Arg Ile Ile Ala Leu Ser Ala Gly Ser Phe Thr Arg  
1 5 10 15

## 4617

Gln Glu Phe Xaa Asn Cys Pro Ile Asn Ile Cys Leu Xaa Ser Cys Lys  
20 25 30

Lys Asp Xaa Phe Ile Phe Cys Ile Phe Ile Thr  
35 40

<210> 5146

<211> 54

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (51)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5146

Phe Gly Ser Leu Lys Met Leu Cys Gly Ala Lys Gln Ile Val Cys Gln  
1 5 10 15

Met Trp Pro Ser Ser Cys Gln Ser Cys Leu Tyr Gln Asp Ala Ser Leu  
20 25 30

Leu Thr Asn Ser His Ile Ala Thr Gly Val Glu Thr Val Leu Ala Thr  
35 40 45

Lys Leu Xaa Gly Phe His  
50

<210> 5147

<211> 57

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (10)

## 4618

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (19)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5147

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Tyr | Pro | Xaa | Pro | Pro | Gly | Xaa | Asp | Xaa | Asp | Gly | Pro | Lys | Ser | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Xaa | Arg | Leu | Tyr | Gly | Lys | Xaa | Gly | Leu | Ser | Asn | Tyr | Phe | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ser | Ile | Val | Phe | His | Cys | Pro | Phe | Val | Phe | His | Lys | Leu | Asn | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Leu | Ile | Phe | Pro | Lys | Ile | Tyr | Phe |
|     | 50  |     |     |     |     | 55  |     |     |

<210> 5148

<211> 101

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (13)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5148

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Phe | Glu | Pro | Thr | Ser | His | Ala | Thr | Ser | His | Lys | Xaa | Thr | Tyr | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Thr | Ser | Ser | Ala | Lys | Met | Pro | Glu | Asn | Ile | Gln | Ser | Ser | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Met | Thr | Gln | Gly | Ser | Leu | Ala | Leu | Leu | Thr | Ile | Phe | Leu | Ala | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Trp | Lys | Gly | His | Leu | Gln | His | Cys | Pro | Gly | Ala | Asn | Thr | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | His | Cys | Leu | Cys | His | Ile | Met | Met | Pro | Ala | Leu | Ala | Ser | Trp | Trp |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|----|
| 65  |     |     |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     |  |  | 80 |
| Val | Phe | Gly | Gly | Ile | Leu | His | Glu | Asp | Cys | Pro | Ile | Arg | Gly | Arg | Tyr |  |  |    |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |  |  |    |
| Thr | Tyr | Leu | Ala | Lys |     |     |     |     |     |     |     |     |     |     |     |  |  |    |
|     |     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |  |  |    |

```

<400> 5149
Ala Arg Ile Arg Met Ala Ile Ser Pro Arg Ser Asp Ala Thr Phe Ser
  1             5             10             15
Ser Gln Lys Ser Thr Pro Ser Glu Ser Pro Arg Thr Lys Lys Phe Pro
          20             25             30
Leu Thr Glu Glu Glu Ile Phe Tyr Met Xaa Cys Arg Ala Ala Tyr Leu
      35             40             45
Thr Val Phe Lys Ser Ser Leu Glu Asn Ile Ile Ser Lys Asp Gln Leu
      50             55             60
Tyr Leu Ala Leu Gln His Ala Gly Arg Asn Pro Ser Gln Lys Thr Ile
  65             70             75             80
Asn Lys Tyr Trp Thr Pro Gln Thr Ala Lys Leu Asn Phe Asp Asp Phe
          85             90             95
Cys Ile Ile Leu Arg Lys Glu Lys Pro Thr Ser Lys Ala Glu Leu Leu
          100             105             110
Lys Ser Phe Lys Gln Leu Asp Val Asn Asp Asp Gly Cys Ile Leu His
          115             120             125
Thr Asp Leu Tyr Lys Phe Leu Thr Lys Arg Gly Glu Lys Met Thr
      130             135             140

```

<210> 5150



## 4620

<211> 80  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (29)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5150  
 Ala Leu Leu Cys Arg Ser Ser Ser Tyr Ile Gly Pro Phe Lys Lys Leu  
   1                  5                  10                  15  
 Pro Ala Glu Ile Pro Gly Val Ile Cys Leu Glu His Xaa Pro Leu Thr  
           20                  25                  30  
 Ser Ser Thr His Leu Leu Ala Ala Pro Arg His Ser Ser Asn Leu Ile  
       35                  40                  45  
 Leu Asn Val Ile Ser Leu Lys Lys Pro Phe Leu Thr Gln Ser Lys Ile  
       50                  55                  60  
 Ser Thr Phe Gly Tyr Ser Leu Ser Gln His Leu Asp Phe Phe Pro Ser  
   65                  70                  75                  80

<210> 5151  
 <211> 29  
 <212> PRT  
 <213> Homo sapiens

<400> 5151  
 Ser Phe Cys Leu Tyr Lys Ser Thr Cys Ser Cys Ala Asn Pro Ser Val  
   1                  5                  10                  15  
 Asp Ser Trp Gln His Glu Ser Leu Ile Pro Gly Tyr Asn  
           20                  25

<210> 5152  
 <211> 181  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE

## 4621

&lt;222&gt; (172)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5152

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Pro | Ser | Pro | Pro | Trp | Thr | Pro | Pro | Gly | Ala | Asp | Arg | Pro | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Gln | Gly | Val | Pro | Pro | Gly | Pro | Tyr | Arg | Ala | Thr | Lys | Leu | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Glu | Val | Thr | Thr | Ser | Phe | Arg | Ala | Gly | Met | Pro | Leu | Arg | Lys | His |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gln | His | Phe | Lys | Lys | Tyr | Gly | Asn | Cys | Phe | Thr | Ala | Gly | Glu | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asp | Trp | Leu | Tyr | Asp | Leu | Leu | Arg | Asn | Asn | Ser | Asn | Phe | Gly | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Thr | Arg | Gln | Gln | Thr | Ile | Gln | Leu | Leu | Arg | Lys | Phe | Leu | Lys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | His | Val | Ile | Glu | Asp | Ile | Lys | Gly | Arg | Trp | Gly | Ser | Glu | Asn | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Asp | Asn | Asn | Gln | Leu | Phe | Arg | Phe | Pro | Ala | Thr | Ser | Pro | Leu | Lys |
|     |     |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Pro | Arg | Arg | Tyr | Pro | Glu | Leu | Arg | Lys | Asn | Asn | Ile | Glu | Asn |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Lys | Asp | Lys | Asp | Ser | Ile | Phe | Lys | Leu | Arg | Asn | Leu | Ser | Arg |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Pro | Lys | Arg | His | Gly | Leu | His | Leu | Ser | Xaa | Glu | Asn | Gly | Glu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Lys | Ile | Asn | Met | Lys |
|     |     |     | 180 |     |

&lt;210&gt; 5153

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4622

&lt;400&gt; 5153

Asn Lys Tyr Asn Met Tyr Ile Pro Asp Leu Leu Ser Ile Leu Tyr Lys  
 1 5 10 15

Val Ala Met Thr Lys Gly Ala Asn Lys Tyr Tyr Ile Ile Tyr Leu Ala  
 20 25 30

Phe Leu Leu His Glu Met Met Trp Val Xaa  
 35 40

&lt;210&gt; 5154

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (127)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5154

Glu Val Gly Phe Ser Leu Pro Ser Pro Gly Pro Val Cys Pro Tyr Pro  
 1 5 10 15

Arg Pro Ala Ser Cys Ala Gln Ile Leu Phe Cys Leu Trp Lys Leu Leu  
 20 25 30

Asp His Pro Arg Ser Ala Ala Cys Pro Asp Pro Tyr Pro Arg Ala Ser  
 35 40 45

Leu Ser Ser Trp Glu Ala Gly Gln Ala Pro Val Arg Phe Arg Cys Ala  
 50 55 60

Leu Cys Leu Ser Leu Asp Ser Arg Ala Asp Glu Pro Gln His His His  
 65 70 75 80

Pro Ala Thr Tyr Lys Val Gly Asp Leu Gly Leu Gly Ser Gln Ala Gln  
 85 90 95

Thr Gly Gly Pro His Ser Pro Leu Gly Pro Leu Pro Thr Pro Val Pro  
 100 105 110

Ser Val Pro Gln Ser Gly Gly Ala Ser Arg Ala Ile Ser Asp Xaa Ala  
 115 120 125

Gly Pro Arg  
 130

## 4623

&lt;210&gt; 5155

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5155

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Lys | Pro | Leu | Lys | Leu | Lys | His | Ile | Ser | Tyr | Leu | Lys | His | Leu | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Thr | Thr | Val | Lys | Tyr | Leu | Ser | Asn | Ile | Gln | Tyr | Met | Glu | Phe | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Thr | Phe | Val | Cys | Ile | Ser | Ile | Cys | Lys | Leu | Leu | Leu | Arg | Arg | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Leu | Asp | Tyr | Phe | Arg | Ile | Gln | Leu | Leu | Gln | Phe | Ser | Ile | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

Asp

65

&lt;210&gt; 5156

&lt;211&gt; 31

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5156

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Gly | Pro | Gln | Ile | Cys | Arg | Val | Cys | Gly | Asp | Arg | Pro | Trp | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| His | Phe | Asn | Val | Met | Thr | Cys | Glu | Gly | Cys | Lys | Gly | Phe | Phe | Arg |  |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |  |

&lt;210&gt; 5157

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (70)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4624

&lt;222&gt; (100)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (104)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5157

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Ala | Trp | Ala | Arg | Ser | Phe | Leu | Val | Asp | Ser | Leu | Val | Leu | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Gly | Glu | Lys | Lys | Ala | Pro | Glu | Gly | Ser | Pro | Pro | Pro | Leu | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Tyr | Ala | Val | Pro | Pro | Pro | His | Ala | Leu | His | Gly | Leu | Ser | Pro | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | His | Ala | Arg | Lys | Ala | Gly | Leu | Leu | Cys | Val | Cys | Pro | Leu | Cys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Thr | Ala | Ser | Gln | Xaa | His | Gly | Pro | Pro | Gly | Pro | Pro | Arg | Cys | Leu |
| 65  |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ser | Arg | Leu | Pro | Ser | His | Pro | Ser | Ala | Arg | Ser | Thr | Ala | Arg | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Pro | Xaa | Ala | Leu | Cys | Xaa | Val | Ala | Arg | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |

&lt;210&gt; 5158

&lt;211&gt; 438

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (299)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (397)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (413)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4625

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (428)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5158

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Gln | Ala | Tyr | Thr | Ala | Tyr | Leu | Ser | Gly | Met | Leu | Arg | Phe | Glu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     | 15  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gln | Glu | Trp | Lys | Ala | Ala | Ile | Glu | Ala | Phe | Asn | Lys | Cys | Lys | Thr |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Tyr | Glu | Lys | Leu | Ala | Ser | Ala | Phe | Thr | Glu | Glu | Gln | Ala | Val | Leu |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Asn | Gln | Arg | Val | Glu | Glu | Ile | Ser | Pro | Asn | Ile | Arg | Tyr | Cys | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Asn | Ile | Gly | Asp | Gln | Ser | Ala | Ile | Asn | Glu | Leu | Met | Gln | Met | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Ser | Gly | Gly | Thr | Glu | Gly | Leu | Leu | Ala | Glu | Lys | Leu | Glu | Ala |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ile | Thr | Gln | Thr | Arg | Ala | Lys | Gln | Ala | Ala | Thr | Met | Ser | Glu | Val |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Trp | Arg | Gly | Arg | Thr | Val | Pro | Val | Lys | Ile | Asp | Lys | Val | Arg | Ile |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Leu | Gly | Leu | Ala | Asp | Asn | Glu | Ala | Ala | Ile | Val | Gln | Ala | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Glu | Glu | Thr | Lys | Glu | Arg | Leu | Phe | Glu | Ser | Met | Leu | Ser | Glu | Cys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asp | Ala | Ile | Gln | Val | Val | Arg | Glu | Glu | Leu | Lys | Pro | Asp | Gln | Lys |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Arg | Asp | Tyr | Ile | Leu | Glu | Gly | Glu | Pro | Gly | Lys | Val | Ser | Asn | Leu |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Tyr | Leu | His | Ser | Tyr | Leu | Thr | Tyr | Ile | Lys | Leu | Ser | Thr | Ala | Ile |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Arg | Asn | Glu | Asn | Met | Ala | Lys | Gly | Leu | Gln | Arg | Ala | Leu | Leu | Gln |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gln | Pro | Glu | Asp | Asp | Ser | Lys | Arg | Ser | Pro | Arg | Pro | Gln | Asp | Leu |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

## 4626

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Ile Arg Leu Tyr Asp Ile Ile Leu Gln Asn Leu Val Glu Leu Leu Gln
      245                      250                      255

Leu Pro Gly Leu Glu Glu Asp Lys Ala Phe Gln Lys Glu Ile Gly Leu
      260                      265                      270

Lys Thr Leu Val Phe Lys Ala Tyr Arg Cys Phe Phe Ile Ala Gln Ser
      275                      280                      285

Tyr Val Leu Val Lys Lys Trp Ser Glu Ala Xaa Val Leu Tyr Asp Arg
      290                      295                      300

Val Leu Lys Tyr Ala Asn Glu Val Asn Ser Asp Ala Gly Ala Phe Lys
305                      310                      315                      320

Asn Ser Leu Lys Asp Leu Pro Asp Val Gln Glu Leu Ile Thr Gln Val
      325                      330                      335

Arg Ser Glu Lys Cys Ser Leu Gln Ala Ala Ala Ile Leu Asp Ala Asn
      340                      345                      350

Asp Ala His Gln Thr Glu Thr Ser Ser Ser Gln Val Lys Asp Asn Lys
      355                      360                      365

Pro Leu Val Glu Arg Phe Glu Thr Phe Cys Leu Gly Pro Phe Pro Cys
      370                      375                      380

Ser Pro Ser Lys Pro Thr Leu Trp His Phe Pro Pro Xaa Phe Gln Pro
385                      390                      395                      400

Phe Pro Trp Gln Gly Phe Cys Ser Leu Asp Trp Ala Xaa Lys Pro Cys
      405                      410                      415

Gly Leu Phe Pro Pro Leu Glu Gly Gln Val Trp Xaa Arg Lys Asp Gln
      420                      425                      430

Glu Trp Ala His Trp Val
      435

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&lt;210&gt; 5159

&lt;211&gt; 275

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (154)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4627

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (181)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (184)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (265)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5159

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Pro | Leu | Val | Leu | Glu | Arg | Arg | Ser | Gly | Asp | Arg | Asp | Leu | Glu | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Trp | Leu | Ala | Gln | Leu | Arg | Arg | Gln | Leu | Glu | Gln | Lys | Val | Ala | Gly |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ile | Gly | Asp | Pro | His | Pro | Thr | Arg | Ser | Asp | Ile | Ser | Gly | Ala | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Thr | Thr | Thr | Glu | Asn | Thr | Phe | Tyr | Gln | Asp | Phe | Ser | Gly | Cys | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Tyr | Ser | Glu | Ala | Pro | Gly | Tyr | Arg | Ser | Ala | Leu | Trp | Leu | Thr | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gln | Thr | Cys | Leu | Leu | Gln | Pro | Ser | Pro | Gln | Gln | Pro | Phe | Pro | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Pro | Gly | Ser | Tyr | Pro | Ala | Gly | Gly | Gly | Ala | Gly | Gln | Thr | Gly | Thr |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Pro | Phe | Tyr | Ser | Val | Pro | Glu | Thr | His | Leu | Pro | Gly | Thr | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Val | Ala | Val | Thr | Glu | Ala | Thr | Gly | Gly | Thr | Val | Trp | Glu | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Gln | Thr | His | Leu | Gly | Pro | Gly | Xaa | Asn | Thr | Val | Ser | Gln | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Gln | Pro | Pro | Asp | Gly | Gln | Glu | Val | Ile | Ser | Lys | Pro | Gln | Thr |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Ala | Ala | Xaa | Pro | Arg | Xaa | Phe | Leu | Arg | Val | Pro | Pro | Val | Gln |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 4628

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
|     | 180 |     | 185 |     | 190 |     |
| Pro | Arg | Arg | Met | Arg | Arg | Ser |
|     | 195 |     |     |     |     | 200 |
| Pro | Leu | Met | Arg | Leu | Ile | Lys |
|     |     |     |     |     |     | 205 |
| Pro | Glu | Ile | Leu | Pro | Arg | Glu |
|     | 210 |     |     |     |     | 215 |
| Ala | Ser | Ser | Glu | Met | Gly | Arg |
|     |     |     |     |     |     | 220 |
| Gln | Arg | Ala | Gln | Gly | Leu | Ala |
|     | 225 |     |     |     |     | 230 |
| Gly | Ser | Ala | Gly | Phe | Asp | Arg |
|     |     |     |     |     |     | 235 |
| Ser | Pro |     |     |     |     |     |
|     |     |     |     |     |     | 240 |
| Pro | Arg | Thr | His | Pro | Pro | Leu |
|     |     |     |     |     |     | 245 |
| Glu | Thr | Arg | Thr | Pro | Gln | Thr |
|     |     |     |     |     |     | 250 |
| Ala | Leu |     |     |     |     |     |
|     |     |     |     |     |     | 255 |
| Thr | Leu | Arg | Arg | Pro | Pro | Glu |
|     |     |     |     |     |     | 260 |
| His | Xaa | Leu | Pro | Thr | Arg | Leu |
|     |     |     |     |     |     | 265 |
| Ala | Trp |     |     |     |     |     |
|     |     |     |     |     |     | 270 |
| Ala | Phe | His |     |     |     |     |
|     |     |     |     |     |     | 275 |

&lt;210&gt; 5160

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (43)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (129)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (132)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (145)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5160

Leu Asp Val Asn Phe Gly Asp Thr Val Gln His Thr Pro Pro Arg Ala

1

5

10

15

## 4629

Pro Arg Gly Gln Ser Gly Trp Lys Ala Glu Gly Pro Ser Thr Val Glu  
                   20                  25                  30  
 Ser Pro Arg Leu Arg Ser Asp Ser Leu Val Xaa Glu Val Phe Pro Gly  
                   35                  40                  45  
 Leu Gly Gln Gly Pro Val Ser Pro Glu Val Pro Gly Cys Pro Pro Ser  
                   50                  55                  60  
 Pro His Ser His Val Pro His Ala Gly Gln Ala Leu Leu Ser Arg Asp  
                   65                  70                  75                  80  
 Thr Ala Phe Met Gly Arg His Arg Pro Leu Ser Gln Glu Pro Glu Val  
                   85                  90                  95  
 Gly Gly Leu Ala Ala Ser Gln Arg Arg Gly Lys Ile Pro Phe Pro Arg  
                   100                  105                  110  
 Ala Phe Gly His Trp Gly Arg Pro Trp Ala Arg Gln Gln Asp Gly Phe  
                   115                  120                  125  
 Xaa Thr Gly Xaa Val Ser Leu Gln Pro Arg Gly Gly Trp Phe Pro Trp  
                   130                  135                  140  
 Xaa Asn  
 145

<210> 5161  
 <211> 163  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (58)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5161  
 Val Lys Ile Glu Pro Glu Asp Leu Asp Ile Ile Gln Val Thr Val Pro  
                   1                  5                  10                  15  
 Asp Pro Ser Pro Thr Ser Glu Glu Met Thr Asp Ser Met Pro Gly His  
                   20                  25                  30  
 Leu Pro Ser Glu Asp Ser Gly Tyr Gly Met Glu Met Leu Thr Asp Lys  
                   35                  40                  45  
 Gly Leu Ser Glu Asp Ala Arg Pro Glu Xaa Arg Pro Val Glu Asp Ser  
                   50                  55                  60

## 4630

His Gly Asp Val Ile Arg Pro Leu Arg Lys Gln Val Glu Leu Leu Phe  
 65 70 75 80  
 Asn Thr Arg Tyr Ala Lys Ala Ile Gly Ile Ser Glu Pro Val Lys Val  
 85 90 95  
 Pro Tyr Ser Lys Phe Leu Met His Pro Glu Glu Leu Phe Val Val Gly  
 100 105 110  
 Leu Pro Glu Gly Ile Ser Leu Arg Arg Pro Asn Cys Phe Gly Ile Ala  
 115 120 125  
 Lys Leu Arg Lys Ile Leu Glu Ala Ser Asn Ser Ile Gln Phe Val Ile  
 130 135 140  
 Lys Arg Pro Glu Leu Leu Thr Glu Glu Ser Lys Ser Pro Ser Trp Ile  
 145 150 155 160  
 Val Asn Glu

&lt;210&gt; 5162

&lt;211&gt; 192

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (24)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5162

Lys Pro Thr Cys Asn Glu Leu Ile Lys Thr Ile Ile Ile Gln His Glu  
 1 5 10 15

Asn Ile Phe Pro Ser Pro Arg Xaa Leu Glu Gly Pro Val Tyr Ser Arg  
 20 25 30

Gly Gly Ser Met Glu Asp Tyr Cys Asp Ser Pro His Gly Glu Thr Thr  
 35 40 45

Ser Val Glu Asp Ser Thr Gln Asp Val Thr Ala Glu His His Thr Ser  
 50 55 60

Asp Asp Glu Cys Glu Pro Ile Glu Ala Ile Ala Lys Phe Asp Tyr Val  
 65 70 75 80

Gly Arg Thr Ala Arg Glu Leu Ser Phe Lys Lys Gly Ala Ser Leu Leu

## 4631

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 85  |  | 90  |  | 95  |
| Leu Tyr Gln Arg Ala Ser Asp Asp Trp Trp Glu Gly Arg His Asn Gly |     |  |     |  |     |
|   | 100 |  | 105 |  | 110 |
| Ile Asp Gly Leu Ile Pro His Gln Tyr Ile Val Val Gln Asp Thr Glu |     |  |     |  |     |
|   | 115 |  | 120 |  | 125 |
| Asp Gly Val Val Glu Arg Ser Ser Pro Lys Ser Glu Ile Glu Val Ile |     |  |     |  |     |
|   | 130 |  | 135 |  | 140 |
| Ser Glu Pro Pro Glu Glu Lys Val Thr Ala Arg Ala Gly Ala Ser Cys |     |  |     |  |     |
|   | 145 |  | 150 |  | 155 |
| Pro Ser Gly Gly His Val Ala Arg Tyr Leu Ser Cys Lys His Gln Gln |     |  |     |  |     |
|   | 165 |  | 170 |  | 175 |
| Ala Lys Glu Ala Ser Arg Ile Trp Glu Ala Ser Glu Asn Phe Ser Glu |     |  |     |  |     |
|   | 180 |  | 185 |  | 190 |

&lt;210&gt; 5163

&lt;211&gt; 319

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (69)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5163

|   |
|---|
| Ala Arg Ala Arg Ala Glu Phe Gly Thr Ser Ser Thr Asn Leu His Leu |
| 1 5 10 15   |

|   |
|---|
| Glu Ser Glu Leu Asp Ala Leu Ala Ser Leu Glu Asn His Val Lys Thr |
| 20 25 30  |

## 4632

Glu Pro Ala Asp Met Asn Glu Ser Cys Lys Gln Ser Gly Xaa Ser Ser  
                   35                                  40                                  45

Leu Val Asn Gly Xaa Ser Pro Ile Arg Ser Leu Met His Arg Ser Ala  
                   50                                  55                                  60

Arg Ile Gly Gly Xaa Gly Asn Asn Lys Asp Asp Asp Pro Asn Glu Asp  
                   65                                  70                                  75                                  80

Trp Cys Ala Val Cys Gln Asn Gly Gly Asp Leu Leu Cys Cys Glu Lys  
                                   85                                  90                                  95

Cys Pro Lys Val Phe His Leu Thr Cys His Val Pro Thr Leu Leu Ser  
                                  100                                 105                                 110

Phe Pro Ser Gly Asp Trp Ile Cys Thr Phe Cys Arg Asp Ile Gly Lys  
                                  115                                 120                                 125

Pro Glu Val Glu Tyr Asp Cys Asp Asn Leu Gln His Ser Lys Lys Gly  
                                  130                                 135                                 140

Lys Thr Ala Gln Gly Leu Ser Pro Val Asp Gln Arg Lys Cys Glu Arg  
                                  145                                 150                                 155                                 160

Leu Leu Leu Tyr Leu Tyr Cys His Glu Leu Ser Ile Glu Phe Gln Glu  
                                  165                                 170                                 175

Pro Val Pro Ala Ser Ile Pro Asn Tyr Tyr Lys Ile Ile Lys Lys Pro  
                                  180                                 185                                 190

Met Asp Leu Ser Thr Val Lys Lys Lys Leu Gln Lys Lys His Ser Gln  
                                  195                                 200                                 205

His Tyr Gln Ile Pro Asp Asp Phe Val Ala Asp Val Arg Leu Ile Phe  
                                  210                                 215                                 220

Lys Asn Cys Glu Arg Phe Asn Glu Met Met Lys Val Val Gln Val Tyr  
                                  225                                 230                                 235                                 240

Ala Asp Thr Gln Glu Ile Asn Leu Lys Ala Asp Ser Glu Val Ala Gln  
                                  245                                 250                                 255

Ala Gly Lys Ala Val Ala Leu Tyr Phe Glu Asp Lys Leu Thr Glu Ile  
                                  260                                 265                                 270

Tyr Ser Asp Arg Thr Phe Ala Pro Leu Pro Glu Phe Glu Gln Glu Glu  
                                  275                                 280                                 285

Asp Asp Gly Glu Val Thr Glu Asp Ser Asp Glu Asp Phe Ile Gln Pro  
                                  290                                 295                                 300

## 4633

Arg Arg Lys Arg Leu Lys Ser Asp Glu Arg Pro Val His Ile Lys  
 305 310 315

<210> 5164

<211> 187

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (11)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (32)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (43)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5164

Arg Glu Gln Lys Leu Glu Leu His Arg Gly Xaa Gly Arg Ser Arg Thr  
 1 5 10 15

Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr Arg Thr Ser Gly Xaa  
 20 25 30

Gly Asn Arg Ala Ala Asn Glu Glu Glu Thr Xaa Asn Lys Pro Lys Leu  
 35 40 45

Asn Ile Gln Ile Lys Thr Leu Ala Asp Asp Val Arg Asp Arg Ile Thr  
 50 55 60

Ser Phe Arg Lys Ser Thr Val Lys Lys Glu Lys Pro Leu Ile Gln His  
 65 70 75 80

Pro Ile Asp Ser Gln Val Ala Met Ser Glu Phe Pro Ala Ala Gln Pro  
 85 90 95

Leu Tyr Asp Glu Arg Ser Leu Asn Leu Ser Glu Lys Glu Val Leu Asp  
 100 105 110

Leu Phe Glu Lys Met Met Glu Asp Met Asn Leu Asn Glu Glu Lys Lys  
 115 120 125

## 4634

Ala Pro Leu Arg Asn Lys Asp Phe Thr Thr Lys Arg Glu Met Val Val  
 130 135 140

Gln Tyr Ile Ser Ala Thr Ala Lys Ser Ile Val Gly Ser Lys Val Thr  
 145 150 155 160

Gly Gly Leu Lys Asn Ser Lys His Glu Cys Thr Leu Ser Ser Gln Glu  
 165 170 175

Tyr Val His Glu Leu Arg Ser Gly Ile Phe Arg  
 180 185

<210> 5165

<211> 266

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (208)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (223)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5165

Thr His Thr Gly Glu Lys Ser Tyr Val Cys Ser Val Cys Gly Arg Gly  
 1 5 10 15

Phe Ser Leu Lys Ala Asn Leu Leu Arg His Gln Arg Thr His Ser Gly  
 20 25 30

Glu Lys Pro Phe Leu Cys Lys Val Cys Gly Arg Gly Tyr Thr Ser Lys  
 35 40 45

Ser Tyr Leu Thr Val His Glu Arg Thr His Thr Gly Glu Lys Pro Tyr  
 50 55 60

Glu Cys Gln Glu Cys Gly Arg Arg Phe Asn Asp Lys Ser Ser Tyr Asn  
 65 70 75 80

Lys His Leu Lys Ala His Ser Gly Glu Lys Pro Phe Val Cys Lys Glu  
 85 90 95

Cys Gly Arg Gly Tyr Thr Asn Lys Ser Tyr Phe Val Val His Lys Arg  
 100 105 110

## 4635

Ile His Ser Gly Glu Lys Pro Tyr Arg Cys Gln Glu Cys Gly Arg Gly  
 115 120 125

Phe Ser Asn Lys Ser His Leu Ile Thr His Gln Arg Thr His Ser Gly  
 130 135 140

Glu Lys Pro Phe Ala Cys Arg Gln Cys Lys Gln Ser Phe Ser Val Lys  
 145 150 155 160

Gly Ser Leu Leu Arg His Gln Arg Thr His Ser Gly Glu Lys Pro Phe  
 165 170 175

Val Cys Lys Asp Cys Glu Arg Ser Phe Ser Gln Lys Ser Thr Leu Val  
 180 185 190

Tyr His Gln Arg Thr His Ser Gly Glu Lys Pro Phe Val Cys Arg Xaa  
 195 200 205

Met Trp Ala Arg Ile Tyr Ser Glu Val Asn Pro Trp Glu Thr Xaa Asp  
 210 215 220

His Thr Leu Arg Gly Glu Ala Phe Cys Val Gln Gly Cys Gly Gln Ala  
 225 230 235 240

Leu Ser Lys Ser Gln Leu His Phe His Gln Arg Thr His Ser Glu Glu  
 245 250 255

Lys Pro Tyr Gly Cys Arg Glu Cys Gly Arg  
 260 265

<210> 5166

<211> 128

<212> PRT

<213> Homo sapiens

<400> 5166

Leu Phe Met Ser Leu Leu Glu Asp Thr Leu Ser Lys Gln Lys Asn Pro  
 1 5 10 15

Asp Val Arg Asn Ile Val Gln Gln Gln Phe Cys Gly Glu Tyr Ala Tyr  
 20 25 30

Val Thr Val Cys Asn Gln Cys Gly Arg Glu Ser Lys Leu Leu Ser Lys  
 35 40 45

Phe Tyr Glu Leu Glu Leu Asn Ile Gln Gly His Lys Gln Leu Thr Asp  
 50 55 60

Cys Ile Ser Glu Phe Leu Lys Glu Glu Lys Leu Glu Gly Asp Asn Arg



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |     |
| Tyr | Phe | Cys | Glu | Asn | Cys | Gln | Ser | Lys | Gln | Asn | Ala | Thr | Arg | Lys | Ile |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     | 95  |     |     |     |
| Arg | Leu | Leu | Ser | Leu | Pro | Cys | Thr | Leu | Asn | Leu | Gln | Leu | Met | Arg | Phe |
|     |     |     |     | 100 |     |     |     | 105 |     |     |     | 110 |     |     |     |
| Val | Phe | Asp | Arg | Gln | Thr | Gly | His | Lys | Lys | Lys | Leu | Asn | Thr | Tyr | Ile |
|     |     |     |     | 115 |     |     |     | 120 |     |     |     | 125 |     |     |     |

Gln Leu Ala Ala Leu Ser Thr Lys Leu Gln Ala Gln Val Glu Cys Ser  
65 70 75 80

## 4637

His Ser Ser Gln Gln Arg Gln Asp Ser Leu Ser Ser Glu Val Asp Thr  
                     85                    90                    95

Leu Lys Gln Ser Cys Trp Asp Xaa Glu Arg Ala Met Xaa Asp Leu Ala  
                     100                    105                    110

Glu His Ala Gly Xaa Lys Lys Cys Gln Leu Ala Ser Phe Gln Gln Arg  
                     115                    120                    125

&lt;210&gt; 5168

&lt;211&gt; 141

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (89)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (110)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (128)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5168

Asn Leu Thr Asn Val Met Tyr Val Thr Asn Pro Ser Gly Met Val Pro  
   1                    5                    10                    15

Pro Leu Leu Tyr Ile Lys Gly Phe Ile Pro Glu Lys Asn His Met Asn  
                     20                    25                    30

Val Met Phe Ala Glu Lys Pro Ser Ala Ile Met His His Ser Leu Asn  
                     35                    40                    45

Ile Lys Glu Tyr Ile Leu Glu Lys Ser Leu Leu Ser Lys Glu Cys Gly  
                     50                    55                    60

Lys Ala Phe Arg Gln Asn Ile His Leu Ala Ser His Leu Arg Ile His  
   65                    70                    75                    80

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gly | Glu | Lys | Pro | Phe | Glu | Cys | Xaa | Glu | Cys | Gly | Lys | Ser | Phe | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ile | Ser | Ser | Gln | Leu | Ala | Thr | His | Gln | Arg | Ile | His | Thr | Xaa | Glu | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Tyr | Glu | Cys | Lys | Val | Cys | Ser | Lys | Ala | Phe | Thr | Gln | Lys | Val | Xaa |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | His | Ser | Ser | Glu | Asn | Pro | Thr | Gly | Glu | Glu | Thr | Leu |     |     |     |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

Val Cys Thr Val Leu Ile Lys Ile Leu Asp Phe Tyr  
50 55 60

Asn Thr Arg Asp Glu Asp Glu Xaa Thr Pro Leu His Arg Ala Ala Tyr  
20 25 30

## 4639

Ser Gly His Leu Asp Ile Val Gln Glu Leu Ile Ala Gln Gly Ala Asp  
           35                          40                          45  
 Val His Ala Val Thr Val Asp Gly Trp Thr Pro Leu His Ser Ala Cys  
           50                          55                          60  
 Lys Trp Asn Asn Thr Arg Val Ala Ser Phe Leu Leu Gln His Asp Ala  
           65                          70                          75                          80  
 Asp Ile Asn Ala Gln Thr Lys Gly Leu Leu Thr Pro Leu His Leu Ala  
                           85                          90                          95  
 Ala Gly Asn Arg Asp Ser Lys Asp Thr Leu Glu Leu Leu Leu Met Asn  
                           100                          105                          110  
 Arg Tyr Val Lys Pro Gly Leu Lys Asn Asn Leu Glu Glu Thr Ala Phe  
           115                          120                          125  
 Asp Ile Ala Arg Arg Thr Ser Ile Tyr His Tyr Leu Phe Glu Ile Val  
           130                          135                          140  
 Glu Gly Cys Thr Asn Ser Ser Pro Gln Ser  
           145                          150

&lt;210&gt; 5171

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (23)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4640

&lt;400&gt; 5171

Thr Xaa Gly Leu Xaa Gly Thr Pro Ala Gly Thr Gly Pro Glu Phe Pro  
 1 5 10 15

Gly Arg Pro Thr Arg Pro Xaa Lys Xaa Met Glu Lys Asp Pro Ser Arg  
 20 25 30

Leu Leu Leu Trp Ala Ala Glu Lys Asn Arg Val Lys Lys Lys Ile Thr  
 35 40 45

Glu Gly Ser Val Thr Val Gly Lys Ala Leu Gly Ser Ser Gln Lys Thr  
 50 55 60

Cys Leu Tyr Cys Tyr Gly His His Thr Tyr Leu Leu Ile Val Arg Thr  
 65 70 75 80

Lys

&lt;210&gt; 5172

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5172

Met Cys Thr Arg Ser Leu Thr Ala Leu Ser Glu Pro Arg Thr Pro Gly  
 1 5 10 15

Pro Pro Gly Leu Thr Thr Thr Pro Ala Pro Pro Asp Lys Leu Gly Gly  
 20 25 30

Lys Gln Arg Ala Ala Phe Lys Ser Gly Lys Arg Val Gly Lys Pro Ser  
 35 40 45

Pro Lys Ala Ala  
 50

&lt;210&gt; 5173

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4641

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (97)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (102)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5173

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Ala | Pro | Gly | Ser | Arg | Arg | Leu | Leu | Ser | Ala | Glu | Gln | Pro | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | His | Pro | Leu | Pro | Leu | Lys | Ile | Cys | Arg | Leu | Arg | Leu | Leu | Ser | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Arg | Pro | Ser | Arg | Pro | Gly | Ala | Gly | Arg | Ala | Leu | Ala | Cys | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Arg | Cys | Xaa | Gln | Pro | Gly | Arg | Trp | Gly | Arg | Ala | Val | His | Arg |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Arg | Ala | Arg | Leu | Gly | Ala | Gly | Thr | Glu | Pro | Pro | Trp | Glu | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Gln | Leu | Arg | Cys | Ser | Pro | Trp | Leu | Gln | Pro | Ser | Pro | Ala | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Leu | Ala | Glu | Gln | Xaa | Arg | His | Trp | Ala | Pro | Pro |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |

&lt;210&gt; 5174

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5174

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Phe | Ala | Arg | Ile | Leu | Leu | Met | Asp | Leu | Ser | Val | Thr | Pro | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | His | Leu | Ser | His | Pro | Val | Pro | Glu | Cys | Ser | Pro | His | Pro | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Trp | Ser | Arg | Glu | Val | Phe | Ala | Pro | Arg | Ile | Cys | Pro | Glu | Leu | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gln | Pro | Leu | Gln | Val | Trp | Val | Leu | Leu | Gln | Asp | Cys | Val | Glu | Leu |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

## 4642

Phe Leu Leu Lys Asn Phe Pro Gly Asp Asp His Ser Ala Trp Ser Leu  
65 70 75 80

Gly Trp Ser Leu Val  
85

<210> 5175  
<211> 78  
<212> PRT  
<213> Homo sapiens

<400> 5175  
Ser Gln Val Met Gly Thr Glu Arg Phe Ile Val Leu Phe Leu Phe Leu  
1 5 10 15

Leu Tyr Gly Ser Ser Gln Ser Phe Asn Ser Met Ala Gln Val Thr Gln  
20 25 30

Ser Arg Val Leu Arg Ala Cys Gly Leu Trp Gln His His Pro Gln Thr  
35 40 45

Asp Thr Ala Glu Glu Pro Gly Ala Val Ser Cys Arg Cys Ala Trp Leu  
50 55 60

Gly Thr Glu Trp Lys Ala Leu Gly Arg Ile Phe Ile Glu Val  
65 70 75

<210> 5176  
<211> 132  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (9)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (34)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (40)  
<223> Xaa equals any of the naturally occurring L-amino acids

## 4643

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5176

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Thr | Lys | Ile | Tyr | Arg | Ser | Xaa | Ser | Ala | Met | Tyr | Ser | Arg | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Gln | Arg | Asn | Ser | Lys | Val | Phe | Ala | Thr | Val | Ser | Ser | Pro | Ala | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Xaa | Asp | Asn | Ser | Pro | Ala | Xaa | Xaa | Asn | Val | Val | Glu | Thr | Asn | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Lys | His | Leu | Thr | His | Leu | Ser | Leu | Lys | Leu | Leu | Pro | Gly | Asn | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Glu | Ile | Lys | Lys | Phe | Leu | Ala | Gly | Cys | Leu | Lys | Cys | Ser | Lys | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Leu | Ser | Leu | Met | Gln | Ser | Leu | Asp | Asp | Ala | Thr | Lys | Gln | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Phe | Thr | Arg | Lys | Thr | Leu | Ala | Glu | Lys | Lys | Gln | Glu | Leu | Asp | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Asn | Glu | Trp | Ala | Ser | His | Thr | Ala | Ala | Leu | Thr | Asn | Lys | His |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Ser | Gln | Glu | Leu |
| 130 |     |     |     |

&lt;210&gt; 5177

&lt;211&gt; 77

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5177

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Gln | Leu | Leu | Tyr | Glu | Leu | Ala | Lys | Leu | Ala | Gln | Val | Asn | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Phe | Ser | Ala | Arg | Gln | Leu | Leu | Ile | Arg | Thr | Gly | Arg | Asp | Gly | Ser |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 4644

20 25 30  
 Tyr Thr Thr Thr Gly Asp Asn Ser Arg Leu Cys Arg Lys Phe Gln Asp  
 35 40 45  
 Leu Gly Ser Arg Thr Met His Asp Thr Gln Ser Xaa Ile Ala Gly Gly  
 50 55 60  
 Arg Ala Thr Val Lys Arg Pro Lys Ser Ile Lys Met Cys  
 65 70 75

&lt;210&gt; 5178

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (11)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5178

Phe Gly Thr Ser Arg Arg Arg Xaa Ala Lys Xaa Thr Leu Tyr Cys Arg  
 1 5 10 15

Val Phe Leu Leu Asp Gly Thr Glu Val Ser Val Asp Leu Pro Lys His  
 20 25 30

Ala Lys Gly Gln Asp Leu Phe Asp Gln Ile Val Tyr His Leu Asp Leu  
 35 40 45

Val Glu Thr Asp Tyr Phe Gly Leu Gln Phe Leu Asp Ser Ala Gln Val  
 50 55 60

Ala His Trp Leu Asp His Ala Lys Pro Ile Lys Lys Gln Met Lys Ile  
 65 70 75 80

Gly Pro Ala Tyr Ala Leu His Phe Arg Val Lys Tyr Tyr Ser Ser Glu  
 85 90 95

Pro Asn Asn Leu Arg Glu Glu Phe Thr Arg Tyr Leu Phe Val Leu Gln  
 100 105 110

Leu Arg His Asp Ile Leu Ser Gly Lys Leu Lys Cys Pro Tyr Glu Thr

## 4645

|   |     |     |
|---|-----|-----|
| 115   | 120 | 125 |
| Ala Val Glu Leu Ala Ala Leu Cys Leu Gln Ala Asp Phe Val |     |     |
| 130   | 135 | 140 |

&lt;210&gt; 5179

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5179

|   |
|---|
| Arg Arg His Leu Glu Ile Lys Xaa Leu Ile Met Leu Gln Tyr Cys Ile |
| 1 5 10 15   |

|   |
|---|
| Tyr Phe Ser Leu Tyr Thr Val Phe Phe Phe Val Ser Pro Glu Thr Ser |
| 20 25 30  |

|   |
|---|
| Phe Pro Phe Arg Phe Phe Ser Cys Ser Ile Lys Leu Ile Tyr Ile Ser |
| 35 40 45  |

|   |
|---|
| Thr Tyr Ser Asn Gly Val Leu Val Phe Val Ser |
| 50 55                                       |

&lt;210&gt; 5180

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (91)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (102)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (104)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4646

&lt;400&gt; 5180

Leu Pro Leu Arg Asn Lys Ile Leu Met Leu Ser Phe Asp Leu Arg Val  
 1 5 10 15

Gly Gly Leu Gly Pro Lys Ala Asp Arg Leu Glu Glu Leu Val Glu Glu  
 20 25 30

Leu Glu Ala Ala Pro Cys Cys Pro Leu Leu Glu Val Gly Ser Val Leu  
 35 40 45

Asp Leu Leu Val Gln Leu Ala Gly Ser Gly Pro Pro Gln Val Leu Pro  
 50 55 60

Arg Lys Arg Asp Tyr Phe Leu Asn Asn Lys His Val Gly Arg Asn Val  
 65 70 75 80

Pro Tyr Ser Gly Tyr Asp Cys Asp Asp Leu Xaa Val Phe Glu Met Asp  
 85 90 95

Val Gln Ser Leu Ile Xaa Arg Xaa Glu  
 100 105

&lt;210&gt; 5181

&lt;211&gt; 217

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (55)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (68)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (196)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (214)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5181

## 4647

Val Lys Ile Asn Arg Lys Thr Ala Phe Gly Thr Thr Thr Leu Val Leu  
 1 5 10 15  
 Thr Asp Phe Ser Asn Lys Ser Ser Thr Leu Glu Arg Lys Thr Lys Gln  
 20 25 30  
 Asn Gln Ile Leu Asp Glu Glu Phe Gln Asn Ser Pro Pro Ala Ser Val  
 35 40 45  
 Cys Leu Asn Asp Ile Gln Xaa Pro Ser Lys Lys Thr Thr Asn Asp Ile  
 50 55 60  
 Thr Gln Leu Xaa Ser Ile Val Asn Ile Ser Pro Thr Ile Ser Ser Glu  
 65 70 75 80  
 Ser Lys Leu Phe Ser Pro Ala His Lys Lys Pro Lys Thr Ala His Tyr  
 85 90 95  
 Ser Ser Pro Glu Leu Lys Ser Cys Asn Pro Gly Tyr Ser Asn Ser Glu  
 100 105 110  
 Leu Gln Ile Asn Met Thr Asp Gly Pro Arg Thr Leu Asn Pro Asp Ser  
 115 120 125  
 Pro Arg Cys Ser Lys His Asn Arg Leu Cys Ile Leu Arg Val Val Arg  
 130 135 140  
 Lys Asp Gly Glu Asn Lys Gly Arg Ala Val Leu Cys Leu Ser Ser Tyr  
 145 150 155 160  
 Leu Gly Gly Arg His Asn Val Gly Phe Phe Trp Asn Gly Ala Asp Phe  
 165 170 175  
 Val Pro Phe Pro Phe Trp Gln Pro Gly Ala Arg Arg Phe Pro Pro Trp  
 180 185 190  
 Lys Thr Val Xaa Gly Arg Phe Gly Thr Leu Thr Leu Gly Lys Gly Phe  
 195 200 205  
 Phe Phe Cys Cys Gly Xaa Leu Trp Gly  
 210 215

&lt;210&gt; 5182

&lt;211&gt; 150

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5182

Asn Ile Pro Gly Ser Gly His His Ala Phe Cys Lys Pro Pro Trp Gly

## 4648

1                      5                      10                      15  
 Ala Ala Glu Leu Asp Met Gly Arg Arg Asp Ala Gln Leu Leu Ala Ala  
                          20                                      25                                      30  
 Leu Leu Val Leu Gly Leu Cys Ala Leu Ala Gly Ser Glu Lys Pro Ser  
                          35                                      40                                      45  
 Pro Cys Gln Cys Ser Arg Leu Ser Pro His Asn Arg Thr Asn Cys Gly  
                          50                                      55                                      60  
 Phe Pro Gly Ile Thr Ser Asp Gln Cys Phe Asp Asn Gly Cys Cys Phe  
                          65                                      70                                      75                                      80  
 Asp Ser Ser Val Thr Gly Val Pro Trp Cys Phe His Pro Leu Pro Lys  
    85                                      90                                      95  
 Gln Glu Ser Asp Gln Cys Val Met Glu Val Ser Asp Arg Arg Asn Cys  
    100                                      105                                      110  
 Gly Tyr Pro Gly Ile Ser Pro Glu Glu Cys Ala Ser Arg Lys Cys Cys  
    115                                      120                                      125  
 Phe Ser Asn Phe Ile Phe Glu Val Pro Trp Cys Phe Phe Pro Lys Ser  
    130                                      135                                      140  
 Val Glu Asp Cys His Tyr  
 145                                      150

&lt;210&gt; 5183

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5183

Asn Ser Met Thr Lys Gly Leu Ile Gln Gly Glu Lys Gly Tyr Met Lys  
 1                      5                      10                      15  
 Thr His Ser Ser Leu Phe Tyr Ser Leu Pro Trp Leu Glu Ile Asn Arg  
                          20                                      25                                      30  
 His Ile Val Leu Phe Ile Met Gly Arg Lys Val Gly Lys Asp His Leu  
                          35                                      40                                      45  
 Ser Ala Tyr Gly Val Leu Ala Leu Ala His Gly Glu  
                          50                                      55                                      60

## 4649

&lt;210&gt; 5184

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5184

Leu Ala Ile Asp Ser Thr Gly Leu Lys His Thr Ile Lys Cys Ile His  
1 5 10 15

Asp Ile Val His Thr Gln Lys Pro Pro Leu Ile Ile Glu Ile Thr Cys  
20 25 30

Ile Leu Phe Gly Asn His Leu Ser Leu Val Leu Lys Tyr Tyr Ile Phe  
35 40 45

Cys Ala Ser Met Tyr Phe Ser Ile Tyr Lys Pro Met  
50 55 60

&lt;210&gt; 5185

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5185

Leu Gln Phe Ile Lys Leu Ile Thr Arg Gln Asn Tyr Ile Phe Lys Met  
1 5 10 15

Ser Lys Gly Leu Asn His Glu Lys Asn Ser Ser Thr Leu Leu Pro Asn  
20 25 30

Tyr Cys Phe Gln Asp Ser Gln Ser Met Leu Tyr Ile His Leu Tyr Phe  
35 40 45

Ser Leu Tyr Ile  
50

&lt;210&gt; 5186

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (59)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5186

## 4650

Tyr Cys Tyr Ser Arg Thr Val Leu Ile Val Cys Ile Leu Lys Arg Cys  
 1 5 10 15  
 Asp Ser Gly Leu Ile Phe Ile Ser Val Ile Leu Lys Gly Trp Val Trp  
 20 25 30  
 Phe Tyr Arg Val Phe Cys Ile Leu Val Gly Ile His Lys Tyr Gln Met  
 35 40 45  
 Cys Cys Ile Ile Lys Ile Thr Leu Thr Phe Xaa Lys Lys Lys Lys Lys  
 50 55 60  
 Lys Lys Lys Lys Lys  
 65

<210> 5187

<211> 123

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (86)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (90)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (91)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (117)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (121)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5187

His Glu Leu Thr Arg Asn Gly Gly Gly Gly Gly Ala Ala Leu Gly Gly  
 1 5 10 15

## 4651

Glu Glu Gly Ala Ala Thr Arg Pro Arg Ala Ala Pro Gly Pro Gly Leu  
                   20                  25                  30  
 Arg Met Glu Pro Phe Arg Arg Arg Leu Tyr Ala Gly Pro Gln Arg Arg  
                   35                  40                  45  
 Pro Thr Arg Ala Asp Pro Arg His Pro Arg Phe Lys Glu Pro Ser Pro  
                   50                  55                  60  
 Gly Leu Gly Pro Trp Pro Leu Thr Arg Gln Gly Thr Ala Leu Gly Gly  
                   65                  70                  75                  80  
 Leu Val Cys Arg Gly Xaa Pro Ala Ala Xaa Xaa His Gly Tyr Leu Ala  
                   85                  90                  95  
 Lys Lys Leu His Ser Pro Ser Asp Gln Phe Pro Pro Arg Ala Lys Asn  
                   100                  105                  110  
 Pro Glu Leu Glu Xaa Asn Ser Leu Xaa Phe Leu  
                   115                  120

&lt;210&gt; 5188

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (57)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5188

Lys Cys Tyr Ile Leu Leu Gly Tyr Arg Gly Ala Gly Glu Thr Ala Glu  
           1                  5                  10                  15  
 Glu Arg Lys Asn Met Trp Lys Thr Pro Arg Ser Ser Lys Phe Tyr Pro  
                   20                  25                  30  
 Glu Phe Tyr Leu Pro Cys Met Phe Cys Leu Arg His Phe Ser Cys Asp  
                   35                  40                  45  
 Ile Arg Lys Ala Ile Ser Lys Gly Xaa Phe Phe Val Ala Lys Ile Tyr  
                   50                  55                  60  
 Phe Thr Leu  
           65



## 4652

&lt;210&gt; 5189

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5189

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Pro | Asn | Ser | Pro | Ala | Tyr | Phe | Tyr | Ala | Thr | Phe | Pro | Phe | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Ser | Leu | Ala | Ile | Phe | Asp | Ser | Ser | His | Phe | Leu | Thr | Pro | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Gln | Tyr | Asn | Val | His | Thr | Phe | Ile | Thr | Leu | Ile | Pro | Leu | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ile | Leu | Trp | Phe | Ala | Phe | Pro | His |
|     | 50  |     |     |     |     | 55  |     |     |

&lt;210&gt; 5190

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (32)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5190

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Val | Pro | Asn | Ser | Cys | Ser | Pro | Gly | Asp | Pro | Leu | Val | Leu | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Pro | Pro | Arg | Trp | Ser | Ser | Ser | Phe | Val | Pro | Leu | Val | Arg | Xaa |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |
|-----|-----|-----|
| Gly | Val | Ala |
|     |     | 35  |

&lt;210&gt; 5191

&lt;211&gt; 19

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5191

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ile | Lys | Leu | Thr | Ser | Lys | Gln | Met | Ile | Thr | Ile | His | Asn | Thr | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 4653

Gly Arg Thr

&lt;210&gt; 5192

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (27)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5192

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Phe | Leu | Glu | Gly | Phe | His | Glu | Ile | Ser | Pro | Ser | His | Ile | Ser | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gln | Tyr | Lys | Met | Gln | Lys | Cys | Leu | Leu | Xaa | Lys | Thr | Gly | Asp | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Thr | Thr | Thr | Leu | Gly | Ile | Ser | Gln | Leu | Pro | Leu | Gly | Thr | Gln | Pro |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Xaa | Val | Glu | Thr | Cys | Leu | Asp | Trp | His | Ser | Gly | Ser | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |

&lt;210&gt; 5193

&lt;211&gt; 326

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (169)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (173)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4654

<221> SITE  
 <222> (174)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (228)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (273)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (281)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5193  
 Leu Pro Gln Arg Cys His Gly Val Leu Arg Arg Arg Lys Asp Trp Asn  
 1 5 10 15  
 Val Arg Leu Gln Ala Phe Phe Thr Ser Asp Thr Gly Leu Glu Tyr Glu  
 20 25 30  
 Ala Pro Lys Leu Tyr Pro Ala Ile Pro Ala Ala Arg Arg Arg Pro Ile  
 35 40 45  
 Arg Val Leu Ser Leu Phe Asp Gly Ile Ala Thr Gly Tyr Leu Val Leu  
 50 55 60  
 Lys Glu Leu Gly Ile Lys Val Gly Lys Tyr Val Ala Ser Glu Val Cys  
 65 70 75 80  
 Glu Glu Ser Ile Ala Val Gly Thr Val Lys His Glu Gly Asn Ile Lys  
 85 90 95  
 Tyr Val Asn Asp Val Arg Asn Ile Thr Lys Lys Asn Ile Glu Glu Trp  
 100 105 110  
 Gly Pro Phe Asp Leu Val Ile Gly Gly Ser Pro Cys Asn Asp Leu Ser  
 115 120 125  
 Asn Val Asn Pro Ala Arg Lys Gly Leu Tyr Glu Gly Thr Gly Arg Leu  
 130 135 140  
 Phe Phe Glu Phe Tyr His Leu Leu Asn Tyr Ser Arg Pro Lys Glu Gly  
 145 150 155 160  
 Asp Asp Arg Pro Phe Phe Trp Met Xaa Glu Asn Val Xaa Xaa Met Lys

## 4655

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 165 |  | 170 |  | 175 |
| Val Gly Asp Lys Arg Asp Ile Ser Arg Phe Leu Glu Cys Asn Pro Val |     |  |     |  |     |
|   | 180 |  | 185 |  | 190 |
| Met Ile Asp Ala Ile Lys Val Ser Ala Ala His Arg Ala Arg Tyr Phe |     |  |     |  |     |
|   | 195 |  | 200 |  | 205 |
| Trp Gly Asn Leu Pro Gly Met Asn Arg Pro Val Ile Ala Ser Lys Asn |     |  |     |  |     |
|   | 210 |  | 215 |  | 220 |
| Asp Lys Leu Xaa Leu Gln Asp Cys Leu Glu Tyr Asn Arg Ile Ala Lys |     |  |     |  |     |
|   | 225 |  | 230 |  | 235 |
| Leu Lys Lys Val Gln Thr Ile Thr Thr Lys Ser Asn Ser Ile Lys Gln |     |  |     |  |     |
|   | 245 |  | 250 |  | 255 |
| Gly Lys Asn Gln Leu Phe Pro Val Val Met Asn Gly Lys Glu Asp Val |     |  |     |  |     |
|   | 260 |  | 265 |  | 270 |
| Xaa Trp Cys Thr Glu Leu Glu Arg Xaa Phe Gly Phe Pro Val His Tyr |     |  |     |  |     |
|   | 275 |  | 280 |  | 285 |
| Thr Asp Val Ser Asn Met Gly Arg Gly Ala Arg Gln Lys Leu Leu Gly |     |  |     |  |     |
|   | 290 |  | 295 |  | 300 |
| Arg Ser Trp Ser Val Pro Val Ile Arg His Leu Phe Ala Pro Leu Lys |     |  |     |  |     |
|   | 305 |  | 310 |  | 315 |
| Asp Tyr Phe Ala Cys Glu   |     |  |     |  |     |
|   | 325 |  |     |  |     |

&lt;210&gt; 5194

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5194

|   |    |   |    |    |    |
|---|----|---|----|----|----|
| Gly His Leu Pro Ser Leu Ile Leu Ser Leu Gln Leu Leu Gly Gln Leu |    |   |    |    |    |
| 1   |    | 5 |    | 10 | 15 |
| Ser Leu Pro Gln Arg Leu Phe Phe Cys Leu Ser Pro Phe Gly Ile Ser |    |   |    |    |    |
|   | 20 |   | 25 |    | 30 |
| His Leu Glu Gly Ile Cys Lys Gly His Ser Val Leu Glu Gln Gly Asn |    |   |    |    |    |
|   | 35 |   | 40 |    | 45 |
| Val Ala Ser Ser Ala Gln Thr Ser Leu Ser His Leu Gln Leu Arg Leu |    |   |    |    |    |
|   | 50 |   | 55 |    | 60 |

## 4656

Gly Met Arg Gly Thr Asp Leu Ala Leu Thr Pro Gly Arg Phe  
 65 70 75

<210> 5195

<211> 52

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (11)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5195

Xaa Xaa Pro Ser Leu Xaa Glu Gln Ser Trp Xaa Ser Thr Ala Val Ala  
 1 5 10 15

Ala Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg  
 20 25 30

Ala Glu Leu Asp Ile Phe Phe Lys Asn Lys Ile Arg Cys Gln Pro Ser  
 35 40 45

Lys Met Phe Leu  
 50

<210> 5196

<211> 37

<212> PRT

<213> Homo sapiens

4657

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5196

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ile | Phe | Leu | Ala | Ser | Gly | Asn | Asp | Gly | Gly | Ala | Leu | Thr | Arg | Val |
| 1   |     |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Cys | Gly | Met | Leu | Leu | Leu | Lys | Xaa | Arg | Arg | Glu | Leu | Ala | Arg | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Arg | Gly | Ser | Arg | Leu |
|     |     |     |     | 35  |

&lt;210&gt; 5197

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5197

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ala | Asp | His | Leu | Leu | Gln | Asn | Ser | Tyr | Leu | Glu | Gln | Phe | Lys | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Pro | Val | Asn | Lys | Asn | Thr | Asp | Gln | Asn | Ala | Leu | His | Val | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Thr | Val | Gly | Ser | Leu | His | Ala | Val | Leu | Asp | Met | Phe | Ile | Ser | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Ala | Met | Lys | Cys | Phe | Ile | Asn | Lys | Lys | Pro | Leu | Tyr | Ile | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |
|-----|-----|
| Leu | Leu |
|     | 65  |

&lt;210&gt; 5198

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5198

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Glu | Ala | Cys | Thr | Gly | Lys | Ala | Pro | Arg | Ser | Gly | Gly | Ile | Pro | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Met | Pro | Glu | Leu | Lys | Asp | Cys | Gly | Trp | Gly | Lys | Arg | Ser | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

4658

Lys Glu Ala Val Cys Gly  
35

&lt;210&gt; 5199

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5199

Asp Val Glu Ile Val Pro Val Leu Gly Asn Tyr Phe Pro Leu Pro Gly  
1 5 10 15

Tyr Gly Lys Glu Asp Val Ile Val Asn Asn Ile His His Pro Val Phe  
20 25 30

Asn Val Leu Gln Gln Cys Ser Asn Leu Phe Phe Ser Phe Val Pro Thr  
35 40 45

Ala Phe Val Tyr Ile Glu Asn Leu Lys Ile Ser Pro Ser Leu Leu Glu  
50 55 60

Val Lys Met Phe Pro Asn Leu Leu Asn Met Pro Leu Phe Thr Ile Cys  
65 70 75 80

Phe Phe Arg Leu Phe Leu Met His Tyr Arg Ile Lys Tyr Asp Phe Val  
85 90 95

Tyr Phe Tyr Tyr Ser Met  
100

&lt;210&gt; 5200

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5200

Phe Leu His His Lys Leu Tyr Leu Asn Val Gly Ala Val Ser Gly Cys  
1 5 10 15

Phe Leu Pro His Gly Glu Thr Trp Ser Ala Val Arg Glu Lys Asn Glu  
20 25 30

Ala Met Met Lys Ala Lys Ser Arg Lys Ser Pro Asp Cys Val Pro Val  
35 40 45

Pro Gly Ser Ser Gly Leu His Val Gln Val His Leu Cys Pro Phe His

## 4659

50                                      55                                      60  
 Val Leu Ile Val Glu Phe Phe Cys Glu Ile Leu Gln Ile Ser  
 65                                      70                                      75

<210> 5201  
 <211> 26  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (3)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5201  
 Ala His Xaa Ser Ala Arg His Ser Cys Pro Gly Asn Val Ala Ala Arg  
 1                                      5                                      10                                      15  
 Asn Trp Trp Val Ser Asn Asn Ile Leu Trp  
 20                                      25

<210> 5202  
 <211> 303  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (257)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5202  
 Val Asn Glu Ile Met Ile Leu Glu Gly Gly Gly Val Met Asn Leu Asn  
 1                                      5                                      10                                      15  
 Pro Gly Asn Asn Leu Leu His Gln Pro Pro Ala Trp Thr Asp Ser Tyr  
 20                                      25                                      30  
 Ser Thr Cys Asn Val Ser Ser Gly Phe Phe Gly Gly Gln Trp His Glu  
 35                                      40                                      45  
 Ile His Pro Gln Tyr Trp Thr Lys Tyr Gln Val Trp Glu Trp Leu Gln  
 50                                      55                                      60  
 His Leu Leu Asp Thr Asn Gln Leu Asp Ala Asn Cys Ile Pro Phe Gln  
 65                                      70                                      75                                      80



## 4660

Glu Phe Asp Ile Asn Gly Glu His Leu Cys Ser Met Ser Leu Gln Glu  
                             85                            90                            95  
 Phe Thr Arg Ala Ala Gly Thr Ala Gly Gln Leu Leu Tyr Ser Asn Leu  
                             100                            105                            110  
 Gln His Leu Lys Trp Asn Gly Gln Cys Ser Ser Asp Leu Phe Gln Ser  
                             115                            120                            125  
 Thr His Asn Val Ile Val Lys Thr Glu Gln Thr Glu Pro Ser Ile Met  
                             130                            135                            140  
 Asn Thr Trp Lys Asp Glu Asn Tyr Leu Tyr Asp Thr Asn Tyr Gly Ser  
 145                            150                            155                            160  
 Thr Val Asp Leu Leu Asp Ser Lys Thr Phe Cys Arg Ala Gln Ile Ser  
                             165                            170                            175  
 Met Thr Thr Thr Ser His Leu Pro Val Glu Ser Pro Asp Met Lys Lys  
                             180                            185                            190  
 Glu Gln Asp Pro Pro Ala Lys Cys His Thr Lys Lys His Asn Pro Arg  
                             195                            200                            205  
 Gly Thr His Leu Trp Glu Phe Ile Arg Asp Ile Leu Leu Asn Pro Asp  
                             210                            215                            220  
 Lys Asn Pro Gly Leu Ile Lys Trp Glu Asp Arg Ser Glu Gly Val Phe  
 225                            230                            235                            240  
 Arg Phe Leu Lys Ser Glu Ala Val Ala Gln Leu Trp Gly Lys Lys Lys  
                             245                            250                            255  
 Xaa Asn Ser Ser Met Thr Tyr Glu Lys Leu Ser Arg Ala Met Arg Tyr  
                             260                            265                            270  
 Tyr Tyr Lys Arg Glu Ile Leu Glu Arg Val Asp Gly Arg Arg Leu Val  
                             275                            280                            285  
 Tyr Lys Phe Gly Lys Asn Ala Arg Gly Trp Arg Glu Asn Glu Asn  
                             290                            295                            300

&lt;210&gt; 5203

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 4661

<221> SITE  
 <222> (12)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (13)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (49)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5203  
 Arg Thr Ser Ile Leu Leu Lys Arg Ala Cys Arg Xaa Xaa Ser Leu Pro  
           1                  5                  10                  15  
 Pro Thr Leu Ser His Leu Arg Leu His Leu Gln Leu Ala Pro Arg Ser  
                   20                  25                  30  
 Cys Gly Asp Gly Ser Pro Trp Gln Pro Pro Ala Asp Leu Ser Gly Leu  
           35                  40                  45  
 Xaa Ile Glu Glu Val Ser Lys Ser Leu Arg Phe Ile Gly Leu Ser Glu  
           50                  55                  60  
 Asp Val Ile Ser Phe Phe Val Thr Glu Lys Ile Asp Gly Asn Leu Leu  
           65                  70                  75                  80  
 Val Gln Leu Thr Glu Glu Ile Leu Ser Glu Asp Phe Lys Leu Ser Lys  
                   85                  90                  95  
 Leu Gln Val Lys Lys Ile Met Gln Phe Ile Asn Gly Trp Arg Pro Lys  
           100                  105                  110  
 Ile

<210> 5204  
 <211> 46  
 <212> PRT  
 <213> Homo sapiens

<400> 5204  
 Lys Ser Pro Thr Met Phe Leu Asn Ser Lys Cys Lys Leu Ser Ala Arg  
           1                  5                  10                  15  
 Val Asp Ile His Thr Ala Cys Phe His Met Trp His Phe Tyr Val Ser

## 4662

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
|     | 20  |     | 25  |     | 30  |
| Cys | Trp | Val | Ile | Val | Leu |
|     | 35  |     | 40  |     | 45  |
| Asp | Trp | Thr | Val | Lys | Tyr |
|     |     |     |     |     | Val |

&lt;210&gt; 5205

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (55)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5205

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Thr | Met | Ala | Glu | Thr | Lys | Leu | Gln | Leu | Phe | Val | Lys | Ala | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Gly | Glu | Ser | Val | Gly | His | Cys | Pro | Ser | Tyr | Leu | Asp | Ser | Ala |
|     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Glu | Lys | Glu | Phe | Lys | Tyr | Thr | Cys | Pro | His | Ser | Ala | Glu | Ile |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Ala | Tyr | Arg | Pro | Xaa | Val | His | Pro | Arg |
| 50  |     |     |     |     |     | 55  |     |     |     |     |

&lt;210&gt; 5206

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5206

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Leu | Ala | Glu | Lys | Ala | Ile | Leu | Lys | Thr | Phe | Pro | Thr | Ala | Tyr |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Cys | Glu | Val | Asn | Leu | Leu | Gln | Gln | Lys | Ser | Leu | Asp | Val | Glu | Ala |
|     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Val | Arg | Ile | Gln | Leu | Phe | Ile | Ile | Thr | Arg | Tyr |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     |

&lt;210&gt; 5207

&lt;211&gt; 49

## 4663

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (28)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (36)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5207

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ser | Lys | Leu | Glu | Gly | Phe | Glu | Glu | Lys | Glu | Val | Glu | Val | Phe | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Arg | Thr | Leu | Ile | Leu | Leu | Leu | Glu | Ala | Val | Xaa | Arg | Ala | Leu | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Glu | Asn | Xaa | Ser | Ala | Leu | Lys | Gly | Arg | His | Glu | Lys | Gln | Gln | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

Gln

&lt;210&gt; 5208

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5208

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gln | Lys | Arg | Val | Pro | Val | Lys | Trp | Ile | Lys | Gln | Thr | Gly | Lys | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Cys | Xaa | Ala | Gly | Gly | Ala | Glu | Ser | Gln | Pro | Ala | Ser | Ser | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ile | Leu | Leu | Asn | Leu | Tyr | Gln | Ser | Phe | Gln | Asn | Arg | Gly | Gly | Met |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Pro | Leu | Cys | Asp | Ala | Arg | Ser | Gln | Arg | Trp | Asp | Ser | Val | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

## 4664

Gly Leu Cys  
65

<210> 5209  
<211> 103  
<212> PRT  
<213> Homo sapiens

<400> 5209  
Arg Glu Lys His Arg Trp Val Ser Pro Arg His Ser Ser Leu Gln Arg  
1 5 10 15  
Cys Leu His Arg Ala Asn Pro Ala Phe Leu Lys Gly Ala Phe Pro His  
20 25 30  
Leu Met Cys Leu Ser Ala Ser Phe Phe Arg Gln Glu Phe Lys Ser Ile  
35 40 45  
Phe Lys Ile Asp Arg Phe Trp Cys Ser Phe Ala Ser Phe Arg Gly Arg  
50 55 60  
Leu Ser Pro Ala Ser Gly Ile His Pro His Val Gly Thr Arg Ser Ala  
65 70 75 80  
Ala Gly Ser His Val Tyr Glu Met Leu Val Val Phe Phe Phe Phe Ser  
85 90 95  
Phe Ile Leu Glu Val Phe Leu  
100

<210> 5210  
<211> 92  
<212> PRT  
<213> Homo sapiens

<400> 5210  
Gly Arg Val Tyr Cys Leu Phe Lys Trp His Asn Phe Lys Gly Leu Arg  
1 5 10 15  
Val Gln Ser Leu Asn Leu Pro Arg Glu Gly Ala Pro Lys Leu Ser Ser  
20 25 30  
Pro His Thr Ser Gly Phe Leu Cys Gly Gly Gly Ala Gly Ile Ser Lys  
35 40 45  
Leu Trp Cys Glu Arg Val Gly Glu Met Leu Glu Val Gly Val Leu Cys  
50 55 60

## 4665

Ser Arg Pro Pro Ile Leu Ser Gln Cys Pro Leu Pro Pro Ser Ser Pro  
 65 70 75 80

Thr Pro Cys Pro Gln Phe Cys Gly Ala Ser Arg Leu  
 85 90

<210> 5211

<211> 257

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (76)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (127)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (135)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5211

Gly Ala Val Gly Leu Gly Gly Gln Glu Leu Gln Tyr Gly His Gly Leu  
 1 5 10 15

Ser Arg Leu Ser Thr Ser Ala Phe Arg Ala Tyr Gly Gln Gly Thr Leu  
 20 25 30

Tyr Asp Ser Pro Leu Leu Gln Val Ser Ile His Leu Gly Tyr Gly Ile  
 35 40 45

Tyr Arg Pro Val Ser Leu Gly Ser His Ala Leu Phe Pro Phe Leu Ser  
 50 55 60

Trp Leu Asp Gln Pro Leu Trp Asp Gln His Pro Xaa His Thr Pro Pro  
 65 70 75 80

Asp Cys Ser Ser Ile Thr Arg Ile Ala Leu Tyr Phe Val Gln Lys Gly  
 85 90 95

Leu Ala Val Pro Cys Cys Phe His Leu Cys Lys Pro Ile Val Pro Leu  
 100 105 110

## 4666

Ala Ala Val Cys Val Arg Val His Val Cys Val Phe His Leu Xaa Ile  
 115 120 125

His Cys Thr Arg Tyr Leu Xaa Ser Ala His Tyr Val Pro Gly Thr Val  
 130 135 140

Ala Glu Phe Leu Trp Val Cys Leu Ser Met Pro Leu Leu Leu Leu Trp  
 145 150 155 160

Gly Pro Leu Ser Val Leu Leu Phe Val Pro Lys Leu Leu Pro Leu Cys  
 165 170 175

Gln Ser Gly Cys Leu Arg Phe Cys Val Ser Leu Cys Ala Phe Leu Ser  
 180 185 190

Leu Ser Val Leu Val Ser Leu Gln Gly Pro Leu Phe Leu Ser Phe Leu  
 195 200 205

Val Ser Val Leu Cys Pro Leu Cys Pro Leu Asp Ser Leu Gly Leu Cys  
 210 215 220

Arg Pro Leu Val Cys Pro Gly Ser Ser Ala Phe Leu Thr Ser Ser Cys  
 225 230 235 240

Pro Pro Leu His Ser Leu Leu Leu Cys Ser Arg Phe Pro Arg Ser His  
 245 250 255

Phe

&lt;210&gt; 5212

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5212

Ile Thr Cys Ser Asp Leu Ile Thr Phe Asp Lys Phe Glu Lys Phe Val  
 1 5 10 15

Phe Gln Thr Glu Pro Val Ser Ile Asn Glu Glu Asn Glu Gly Phe Glu  
 20 25 30

His Asn Thr Gln Val Arg Asn Gln Gly Ile Ile Ala Leu Ser Tyr Arg  
 35 40 45

Asp Trp Glu Val Lys Leu Cys Leu Leu Pro Leu His Ser Ser Asp Ser  
 50 55 60

Ala Phe Thr Cys Ser Lys Pro Ser Ala

## 4667

65

70

&lt;210&gt; 5213

&lt;211&gt; 41

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5213

Arg Leu Met Thr Ala Phe Leu Arg Ile Ala Asn Arg Gly Gln Arg Gly  
 1 5 10 15

Gly Ser Gln His Phe Gly Arg Pro Arg Arg Val Asp His Glu Val Arg  
 20 25 30

Ser Ser Arg Thr Ala Trp Pro Arg Trp  
 35 40

&lt;210&gt; 5214

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5214

Met Leu Ile Asp Asp Glu Asn Leu Val Gly Cys Arg Ala Gln Phe Arg  
 1 5 10 15

Arg Ser Glu Leu Gly Val Gly Asp Arg Phe Gly Gly Gly Ile Ser Gln  
 20 25 30

Leu Phe Pro Pro Leu Asn Ser Glu Glu Cys Ser Tyr Ala Arg Ser Gln  
 35 40 45

Arg Arg Ala Thr Arg Ser Phe Cys Phe Gly Asp Asn Trp Ser Val Glu  
 50 55 60

Ser Pro Arg Ser Ser Phe Val Ala Phe Cys Ile Leu Leu Pro Gly  
 65 70 75

&lt;210&gt; 5215

&lt;211&gt; 290

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE



## 4668

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5215

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ser | Xaa | Tyr | Xaa | Asn | Ser | Gly | Gln | Xaa | Asp | Ala | Ala | Arg | Gly | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Gly | Arg | Val | Arg | Leu | Trp | Lys | Arg | Ala | Ala | Ala | Ala | His | Asn |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | His | Ser | Leu | Ala | Thr | Ala | Ala | Pro | Val | Pro | Thr | Thr | Leu | Ala | Gln |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asp | Arg | Glu | Lys | Ile | Tyr | Gln | Trp | Ile | Asn | Glu | Leu | Ser | Ser | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Arg | Glu | Asn | Ala | Leu | Leu | Glu | Leu | Ser | Lys | Lys | Arg | Glu | Ser |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Asp | Leu | Ala | Pro | Met | Leu | Trp | His | Ser | Phe | Gly | Thr | Ile | Ala |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Leu | Gln | Glu | Ile | Val | Asn | Ile | Tyr | Pro | Ser | Ile | Asn | Pro | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Thr | Ala | His | Gln | Ser | Asn | Arg | Val | Cys | Asn | Ala | Leu | Ala | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Cys | Val | Ala | Ser | His | Pro | Glu | Thr | Arg | Ser | Ala | Phe | Leu | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | His | Ile | Pro | Leu | Phe | Leu | Tyr | Pro | Phe | Leu | His | Thr | Val | Ser | Lys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Pro | Phe | Glu | Tyr | Leu | Arg | Leu | Thr | Ser | Leu | Gly | Val | Ile | Gly |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Val | Lys | Thr | Asp | Glu | Gln | Glu | Val | Ile | Asn | Phe | Leu | Leu | Thr |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Glu | Ile | Ile | Pro | Leu | Cys | Leu | Arg | Ile | Met | Glu | Ser | Gly | Ser | Glu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4669

195                                      200                                      205  
 Leu Ser Lys Thr Val Ala Thr Phe Ile Leu Gln Lys Ile Leu Leu Asp  
     210                                      215                                      220  
 Asp Thr Gly Leu Ala Tyr Ile Cys Gln Thr Tyr Glu Arg Phe Ser His  
     225                                      230                                      235                                      240  
 Val Ala Met Ile Leu Gly Lys Met Val Leu Gln Leu Ser Lys Glu Pro  
                                     245                                      250                                      255  
 Ser Ala Arg Leu Leu Lys His Val Val Arg Cys Tyr Leu Arg Leu Ser  
                                     260                                      265                                      270  
 Asp Asn Pro Arg Phe Ser Asp Leu Thr Phe Cys Trp Ser Ser Phe Gln  
                                     275                                      280                                      285  
 Arg Lys  
     290

<210> 5216  
 <211> 60  
 <212> PRT  
 <213> Homo sapiens

<400> 5216  
 Ala Arg Phe Ala Arg Ser Ala His Glu Gly Lys Met Pro Lys Lys Lys  
     1                                      5                                      10                                      15  
 Thr Gly Ala Arg Lys Lys Ala Glu Asn Arg Arg Glu Arg Glu Lys Gln  
                                     20                                      25                                      30  
 Leu Arg Ala Ser Arg Ser Thr Ile Asp Leu Ala Lys His Pro Cys Asn  
                                     35                                      40                                      45  
 Ala Ser Met Val Ser Ala Phe Phe Asp Ile Ser Trp  
                                     50                                      55                                      60

<210> 5217  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 5217  
 Glu Ser Ile Gln His Asn Asn Val Leu Lys Pro Ile Asn Leu Leu Ser  
     1                                      5                                      10                                      15

## 4670

Gln Gln Met Lys Pro Gly Met Lys Arg Gln Arg Ser Leu Tyr Arg Glu  
                   20                  25                  30

Ile Leu Phe Leu Ser Leu Val Ser Leu Gly Arg Glu Asn Ile Asp Ile  
           35                  40                  45

Glu Ala Phe Asp Asn Glu Tyr Gly Ile Ala Tyr Asn Ser Leu Ser Ser  
       50                  55                  60

Glu Ile Leu Glu Arg Leu Gln Lys Ile Asp Ala Pro Pro Ser Ala Ser  
   65                  70                  75                  80

Val Glu Trp Cys Arg Lys Cys Phe Gly Ala Pro Leu Ile  
                   85                  90

<210> 5218

<211> 108

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (101)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5218

Asn Thr Lys Thr Asn Lys Gln Xaa Lys Asn Gln Asn Ala Leu Tyr Arg  
   1                  5                  10                  15

Ile Ala Cys Glu Val Phe Ser Thr Glu Ser Ile Phe Pro Phe Val Ser  
           20                  25                  30

Asp Phe Lys Leu Thr Tyr Glu Gly Arg Glu Met Ile Thr Phe Pro Val  
       35                  40                  45

Lys Ser Ile Asp Asn Leu Ile Asn Leu Val Thr Pro Pro Ser Val Leu  
       50                  55                  60

Asn Ile Thr Lys Phe Val Val Ile Arg Leu Ser Ala Pro Val Phe Ile  
   65                  70                  75                  80

Val Glu Leu Pro Leu Ser Leu Glu Thr Phe Leu Leu Lys Asn Asp Gly  
                   85                  90                  95

## 4671

Ser Ile Val Phe Xaa Tyr Val Pro Met Lys Val Gly  
 100 105

<210> 5219

<211> 139

<212> PRT

<213> Homo sapiens

<400> 5219

Arg Thr Ser Pro Arg Phe Gln Phe Gln Gly Leu Thr Phe Leu Arg Arg  
 1 5 10 15

Arg Trp Asn Val Lys Gly Gly Arg Lys Glu Ile Lys Arg Pro Gln Val  
 20 25 30

Lys Met Trp Lys Val Thr Ser Ser Leu Arg Pro Arg Gly Thr Arg Arg  
 35 40 45

Glu Ser Pro Arg Gly Pro Arg Pro Ser Glu Arg Val Ala Lys Lys Lys  
 50 55 60

Ser Ala Pro Ala Glu Glu Gln Leu Arg Gly Pro Cys Trp Asp Gln Ser  
 65 70 75 80

Ser Lys Ala Ser Ala Gln Asp Ala Gly Asp His Val Gln Pro Pro Glu  
 85 90 95

Gly Arg Asp Phe Thr Leu Lys Pro Lys Lys Arg Arg Gly Lys Lys Lys  
 100 105 110

Leu Gln Lys Pro Val Glu Ile Ala Glu Asp Ala Thr Leu Glu Glu Thr  
 115 120 125

Leu Val Lys Lys Lys Lys Lys Lys Asp Ser Lys  
 130 135

<210> 5220

<211> 125

<212> PRT

<213> Homo sapiens

<400> 5220

Ser Arg Gln Asn Glu Lys Gly Gly Gly His Cys Ser Pro Leu Asn Ser  
 1 5 10 15

Phe Phe Arg Ser Ser Ser Met Ser Leu Ser Ala Leu Ala Cys Asp Phe  
 20 25 30

## 4672

Thr Pro Ile Gln Pro Trp Glu Trp Glu Glu Tyr Glu Gln Ile Thr Leu  
                   35                                  40                                  45

Gly Leu Thr Ala Pro Ser Asn Leu Leu Glu Ser Asn Tyr Leu Gly Gln  
           50                                  55                                  60

Ala Ser Glu Cys Phe Val Arg Lys Leu Val Arg Arg Phe Pro Gln Leu  
       65                                  70                                  75                                  80

Leu Pro Gly Pro Pro Gly His Cys Arg Lys Asp Leu Gly Asp Pro Gln  
                                   85                                  90                                  95

Gln Arg Pro Ile Ala Leu Leu Pro Ser Leu Pro His Gln Glu Arg Asn  
                   100                                  105                                  110

Asn Val His Arg Leu Glu Ala Asp Ser Glu Val Asp Leu  
           115                                  120                                  125

<210> 5221

<211> 99

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (11)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (54)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (56)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (57)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5221

Asn Tyr Leu Pro Ser Leu Ser Tyr Ala Ser Xaa Ile Gly Met Leu Leu  
       1                                  5                                  10                                  15

Val Ser Met His Thr Thr Thr Phe His Gly Phe Tyr Cys Ala Gln Thr

## 4673

20 25 30

Leu His Ala Phe Arg Met Ile Tyr Leu Arg Arg Tyr Ile Ile Cys His  
35 40 45

Pro Asp Pro Lys Arg Xaa Arg Xaa Xaa Asp His Ser Glu Pro Leu Ile  
50 55 60

Arg Lys Leu Leu Ala Ser Val Phe Asp Thr Ser Leu Thr Leu Tyr Ile  
65 70 75 80

His Val Ile Ile Ser Cys Gln Ile Leu Asp Ser Ile Asn Cys Pro Leu  
85 90 95

Thr Ala Tyr

<210> 5222

<211> 60

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (13)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (17)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (35)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (39)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

## 4674

&lt;222&gt; (45)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5222

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Tyr | Leu | Val | Glu | Ile | Pro | Glu | Phe | Tyr | Glu | Val | Xaa | Asp | Lys | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Gln | Gly | Leu | Leu | Lys | Ser | Thr | Cys | Ile | Ile | Ser | Pro | Phe | Gln |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Xaa | Thr | Xaa | Val | Xaa | Gly | Lys | Ile | Pro | Val | Xaa | Xaa | Ile | Cys |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Xaa | Phe | Leu | Leu | Pro | His | Leu | Ala | Asn | Asn | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |

&lt;210&gt; 5223

&lt;211&gt; 212

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (206)

## 4675

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (208)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (209)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (211)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5223

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Xaa | Xaa | Asn | Lys | Ser | Trp | Xaa | Ser | Thr | Ala | Val | Ala | Ala | Ala |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Leu | Val | Asp | Pro | Pro | Gly | Cys | Arg | Asn | Ser | Ala | Arg | Ala | Ala |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Met | Lys | Arg | Lys | Ser | Glu | Arg | Arg | Ser | Ser | Trp | Ala | Ala | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Cys | Ser | Arg | Arg | Cys | Ser | Ser | Thr | Ser | Pro | Gly | Val | Lys | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Arg | Ser | Ser | Thr | Gln | Gln | Asp | Pro | Arg | Arg | Arg | Asp | Pro | Gln | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Val | Tyr | Leu | Asp | Ile | Thr | Asp | Arg | Leu | Cys | Phe | Ala | Ile | Leu | Tyr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Arg | Pro | Lys | Ser | Ala | Ser | Asn | Val | His | Tyr | Phe | Ser | Ile | Asp | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Glu | Tyr | Glu | Asn | Phe | Tyr | Ala | Asp | Phe | Gly | Pro | Leu | Asn | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Met | Val | Tyr | Arg | Tyr | Cys | Cys | Lys | Ile | Asn | Lys | Lys | Leu | Lys | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Thr | Met | Leu | Arg | Lys | Lys | Ile | Val | His | Phe | Thr | Gly | Ser | Asp | Gln |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Gln | Ala | Asn | Ala | Ala | Phe | Leu | Val | Gly | Cys | Tyr | Met | Val | Ile |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |



## 4676

Tyr Leu Gly Arg Thr Pro Glu Glu Ala Tyr Arg Ile Leu Ile Phe Gly  
180 185 190

Glu Thr Ser Tyr Ile Pro Phe Arg Asp Ala Ala Tyr Gly Xaa Cys Xaa  
195 200 205

Xaa Thr Xaa Pro  
210

<210> 5224

<211> 48

<212> PRT

<213> Homo sapiens

<400> 5224

Lys Gln Arg Gly Asn Leu Lys Ala Thr Leu Thr His Leu Gln Ser Ser  
1 5 10 15

Gln Ile Leu Thr Phe Thr Arg Leu Ala Phe Cys Phe Trp Ala Ser Pro  
20 25 30

Lys Gln Thr Ala Ser His Pro Asn Arg Gly Arg Met Glu Met Phe Val  
35 40 45

<210> 5225

<211> 98

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (49)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (65)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5225

Trp Tyr Phe Ser Lys Cys Val Leu Val Val Ile Thr Ser Asn Ile Asn  
1 5 10 15

Leu Cys Cys Glu Ser Phe Val Ser Phe Ser Thr Val Phe Gln Arg Lys

## 4677

20 25 30  
 Gly Lys Lys Ser Leu Asn Leu Lys Phe Ile Val Lys Ile Lys Tyr Leu  
 35 40 45  
 Xaa Ala Val Thr Gln Ala His Gly Ser Gln Ala Glu Lys Gly Leu Gly  
 50 55 60  
 Xaa Leu Lys Asn Gly Val Gln Val Val His Gly Arg Leu Leu Asn Ser  
 65 70 75 80  
 Leu Gly Val Gly Met Gly Leu Ala Phe Ser Lys Pro Val His Phe Pro  
 85 90 95  
 Met Ser

&lt;210&gt; 5226

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (51)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5226

Cys Leu Ala His Arg Lys Cys Ser Asp Met Leu Ser Asn Lys Lys Leu  
 1 5 10 15

Met Trp Trp Val Gln Trp Leu Thr Pro Val Ile Pro Ala Leu Trp Glu  
 20 25 30

Ala Glu Val Ser Gly Leu Gln Gly Gln Glu Phe Gln Thr Ser Leu Ala  
 35 40 45

Asn Met Xaa Lys Pro Arg Leu Tyr  
 50 55

&lt;210&gt; 5227

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

## 4678

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (71)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5227

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ser | Lys | Pro | Leu | Asn | Ile | Thr | His | Leu | His | Leu | Gln | Val | Trp | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Xaa | Phe | Lys | Trp | Leu | Leu | Ser | Leu | Leu | His | Ser | Thr | Tyr | Pro | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Leu | Phe | His | Lys | Tyr | Arg | Leu | Asn | Ile | Pro | Tyr | Leu | Lys | Cys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Leu | Xaa | Val | Ser | Asp | Phe | Arg | Tyr | Val | Trp | Ile | Leu | Glu | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Met | Tyr | Asn | Glu | Xaa | Leu | Leu | Glu | Leu | Gly | Pro | Lys | Ser | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asn | Ser | Phe | Met | Phe | His | Ile | Tyr | Leu | Ile | His | Ile | Thr |
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |

&lt;210&gt; 5228

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5228

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Pro | Met | Gln | Val | Trp | Phe | Leu | Ser | Arg | Lys | Asn | Thr | Gly | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Thr | Lys | Gln | Asp | Asp | Asp |
|     |     |     |     | 20  |     |     |     |

&lt;210&gt; 5229

&lt;211&gt; 133

&lt;212&gt; PRT

## 4679

<213> Homo sapiens

<220>

<221> SITE

<222> (11)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (13)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (22)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (26)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (108)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (124)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5229

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Arg | Arg | Gly | Val | Ser | Val | Lys | Ala | Xaa | Lys | Xaa | Glu | Thr | Ala |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Thr | Met | Lys | Asp | Xaa | Ala | Leu | Lys | Xaa | Lys | Val | Ser | Thr | Ala | Thr |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Arg | Ala | Leu | Met | Asn | Pro | Asp | Lys | Val | Ser | Gln | Ala | Thr | Arg |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Arg | Val | Glu | Lys | Ala | Ala | Arg | Glu | Val | Gly | Tyr | Leu | Pro | Gln | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Arg | Asn | Val | Lys | Arg | Asn | Glu | Ser | Arg | Thr | Ile | Leu | Val | Ile |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Asp | Ile | Cys | Asp | Pro | Phe | Phe | Ser | Glu | Ile | Ile | Arg | Gly | Ile |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

## 4680

Glu Val Thr Ala Ala Asn His Gly Tyr Leu Val Xaa Ile Gly Asp Cys  
                   100                  105                  110

Ala His Gln Asn Gln Gln Glu Lys Thr Phe Ile Xaa Leu Ile Ile Thr  
                   115                  120                  125

Lys Gln Ile Asp Trp  
                   130

<210> 5230

<211> 261

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (230)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (243)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (246)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (250)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (257)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5230

Ser Trp Lys Thr Gly Glu Asp Lys Ser Met Ser Ser Leu Pro Gly Cys  
       1                  5                  10                  15

Ile Gly Leu Asp Ala Ala Thr Ala Thr Val Glu Ser Glu Glu Ile Ala  
                   20                  25                  30

Glu Leu Gln Gln Ala Val Val Glu Glu Leu Gly Ile Ser Met Glu Glu  
                   35                  40                  45

## 4681

Leu Arg His Phe Ile Asp Glu Glu Leu Glu Lys Met Asp Cys Val Gln  
 50 55 60  
 Gln Arg Lys Lys Gln Leu Ala Glu Leu Glu Thr Trp Val Ile Gln Lys  
 65 70 75 80  
 Glu Ser Glu Val Ala His Val Asp Gln Leu Phe Asp Asp Ala Ser Arg  
 85 90 95  
 Ala Val Thr Asn Cys Glu Ser Leu Val Lys Asp Phe Tyr Ser Lys Leu  
 100 105 110  
 Gly Leu Gln Tyr Arg Asp Ser Ser Ser Glu Asp Glu Ser Ser Arg Pro  
 115 120 125  
 Thr Glu Ile Ile Glu Ile Pro Asp Glu Asp Asp Asp Val Leu Ser Ile  
 130 135 140  
 Asp Ser Gly Asp Ala Gly Ser Arg Thr Pro Lys Asp Gln Lys Leu Arg  
 145 150 155 160  
 Glu Ala Met Ala Ala Leu Arg Lys Ser Ala Gln Asp Val Gln Lys Phe  
 165 170 175  
 Met Asp Ala Val Asn Lys Lys Ser Ser Ser Gln Asp Leu His Lys Gly  
 180 185 190  
 Thr Leu Ser Gln Met Ser Gly Glu Leu Ser Lys Asp Gly Asp Leu Ile  
 195 200 205  
 Val Ser Met Arg Ile Leu Gly Lys Lys Arg Thr Lys Thr Trp His Lys  
 210 215 220  
 Gly Pro Leu Leu Pro Xaa Arg Gln Leu Asp Gln Gly Ser Thr Gln Ala  
 225 230 235 240  
 Pro Val Xaa Ser Ala Xaa Gln Ala Gln Xaa Arg Lys Glu Asn His Leu  
 245 250 255  
 Xaa Thr Phe Ile Pro  
 260

&lt;210&gt; 5231

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5231

Ile Asn Pro Ala Leu Leu Arg Lys Gly Asn Leu Phe Arg Gln Ser Gly

## 4682

1                      5                      10                      15  
 Lys Gly Val Leu Arg Lys Leu Ser Phe Phe Ile Pro Ser Phe Leu Pro  
                     20                      25                      30  
 Thr Thr Val Thr Gly Tyr Arg Gly Leu Trp Thr Leu Lys Thr Asn Val  
                     35                      40                      45  
 Trp Pro Leu Thr Gly Leu Ile Cys Ile Phe Leu  
                     50                      55

<210> 5232  
 <211> 39  
 <212> PRT  
 <213> Homo sapiens

<400> 5232  
 Thr Ser Ser Pro Trp Ala Ala Pro Pro Gly Ser Gly Gly Pro Glu Pro  
   1                      5                      10                      15  
 Pro Arg Pro Gly Leu Pro Arg Leu Gly Leu Gly Asp Leu Asn Leu Leu  
                     20                      25                      30  
 Thr Leu Gly Cys Pro Ser Trp  
                     35

<210> 5233  
 <211> 71  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (30)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5233  
 Lys Leu Cys Arg Leu Ile Asn Glu Asp Val Asn Glu Gln Val Met Gln  
   1                      5                      10                      15  
 Val Leu Gly Pro Glu Asp Leu Gln Ser Ile Ile Tyr Lys Xaa Glu Glu  
                     20                      25                      30  
 His Glu Glu Phe Phe Pro Ala Phe Gln Ala Phe Thr Asn Asp Leu Leu  
                     35                      40                      45  
 Glu Ile Leu Glu Ile Asp Asp Leu Asp Ala Ile Val Pro Ala Val Lys

## 4683

50                                      55                                      60  
 Lys Leu Lys Val Leu Ser Tyr  
 65                                      70  
  
 <210> 5234  
 <211> 81  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (58)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5234  
 Ala Leu Val Leu Ser Arg Glu Gln Glu Lys Leu Phe Glu Lys Gly Lys  
 1                                      5                                      10                                      15  
 Glu Ser Ile Pro Tyr Leu Ile Arg Thr His Arg His Ala Arg His Gly  
                                     20                                      25                                      30  
 His Gly Val His Val His Leu Ser His Val Thr Thr Ala Ala Ile His  
                                     35                                      40                                      45  
 Val His His Thr Ile His Cys Arg Ile Xaa Leu Val Gly Lys Leu Ala  
                                     50                                      55                                      60  
 Ala Gly Glu Arg Ser Leu Ser Lys Gln Met Val Tyr Tyr Leu Trp Ser  
 65                                      70                                      75                                      80  
 Thr

<210> 5235  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5235  
 Ala Asp Lys Asn Glu Ile Leu Phe Ser Glu Phe Asn Ile Asn Tyr Asn  
 1                                      5                                      10                                      15  
 Asn Glu Leu Pro Met Tyr Arg Lys Gly Thr Val Leu Ile Trp Gln Lys  
                                     20                                      25                                      30  
 Val Asp Glu Val Met Thr Lys Glu Ile Lys Leu Pro Thr Glu Met Glu



35                      40                      45

```

<210> 5236
<211> 53
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (30)
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5236
Leu Glu Cys Trp Val Val Leu Ser Ile Ile Gly Val Lys Cys Gly Ala
 1             5             10             15

Val Ala Tyr Thr Cys Asn Pro Ser Thr Leu Gly Lys Leu Xaa Trp Gly
          20             25             30

Gly Ser Leu Glu Val Gln Glu Phe Glu Ala Thr Leu Gly Gln His Gly
      35             40             45

Gly Thr Pro Ile Phe
      50

```

```
<210> 5237
<211> 60
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (3)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (44)
```

## 4685

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5237

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Xaa | Ser | Gly | Val | Val | Trp | Asp | Arg | Ser | Ala | Thr | His | Ser | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Val | Gln | Glu | Asn | Gln | Phe | Phe | Met | Leu | Tyr | Phe | Gln | Ser | Leu | Tyr |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Phe | Val | Phe | Val | Ser | Lys | Ile | Lys | Lys | Arg | Xaa | Lys | Met | Glu | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |
| Lys | Ile | Pro | Gly | Arg | Gln | Met | Asn | Lys | Arg | His | Glu |     |     |     |     |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

<210> 5238

<211> 59

<212> PRT

<213> Homo sapiens

<400> 5238

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Arg | Lys | Lys | Ser | Phe | Trp | Gly | Met | Leu | Tyr | His | Ser | Asn | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Thr | Thr | Tyr | Phe | Val | Leu | Ser | Met | Ser | Leu | Ile | Pro | Ser | Tyr | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Ile | Trp | Leu | Asp | Tyr | Pro | Val | Tyr | Cys | Val | Glu | Ile | Lys | Val | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ile | Cys | Thr | Phe | Leu | Val | Gln | Tyr | Leu | Ser | Tyr |     |     |     |     |     |
|     | 50  |     |     |     |     | 55  |     |     |     |     |     |     |     |     |     |

<210> 5239

<211> 54

<212> PRT

<213> Homo sapiens

<400> 5239

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Leu | His | Phe | His | Ile | Leu | Val | Ile | Cys | Leu | Leu | His | Thr | Trp | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asn | Lys | Thr | Glu | Ile | Pro | Ser | Gln | Lys | Lys | Lys | Glu | Lys | Glu | Lys | Lys |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Ile | Ala | Leu | Tyr | Leu | Phe | Leu | Val | Ser | Thr | Ala | Met | Lys | Ile | Leu | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

4686

Thr Pro Asn Ser Val Glu  
50

&lt;210&gt; 5240

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5240

Cys Phe Phe Phe Ile Val Phe Gln Ser Val Ser Ile His Leu Lys Lys  
1 5 10 15

Lys Asn Arg Asn Asn Ser Arg Tyr Phe Lys Gln Lys Gly Ile Trp Trp  
20 25 30

Lys Gly Leu Thr Ile Val Met Ser Gly Arg Leu Val Glu Pro Lys Arg  
35 40 45

Arg Gly Cys Cys Pro Lys Ile Arg Lys Leu Pro Val Pro Thr Pro Thr  
50 55 60

Ala Ala Leu Leu Glu Ala  
65 70

&lt;210&gt; 5241

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5241

Thr Gly Glu Ala Ala Leu Trp Gly Leu Pro Ala Ala Gly Ala Gly Glu  
1 5 10 15

Arg His Val Asp Thr Trp Pro Leu Trp Leu Pro Pro Ala Arg Ser Ser  
20 25 30

Ala Gly Pro Ser Pro Trp Gly Trp Ala Ser Cys Ser Arg Ser Arg Thr  
35 40 45

Pro Ser Gly Leu Lys Val Gly Glu Val Trp Trp Trp Arg Trp Gly Gly  
50 55 60

Ser Glu Lys Cys Lys Arg Pro Val Gly Leu Gln Gln Lys Glu Ala Ser  
65 70 75 80

Gly Gly Trp Asp Gly Gly Gln Trp Gly Lys Ala Leu Gly Ser Ile Gly

## 4687

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 85  |  | 90  |  | 95  |
| Gly Ser Leu Ala Ala Asn Ser Leu Asp Phe Gly Gly Gln Val Arg Pro |     |  |     |  |     |
|   | 100 |  | 105 |  | 110 |
| Ala Ser Leu Ala Pro Ala Ala                                     |     |  |     |  |     |
|   | 115 |  |     |  |     |

&lt;210&gt; 5242

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (105)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (106)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5242

|   |
|---|
| Gly Pro Xaa Lys Glu Arg Arg Phe Gly Ala Val Ala Cys Gly Val Ala |
| 1 5 10 15   |

|   |
|---|
| Met Glu Leu Tyr Val Phe Gly Gly Val Arg Ser Arg Glu Asp Ala Gln |
| 20 25 30  |

|   |
|---|
| Gly Ser Glu Met Val Thr Cys Lys Ser Glu Phe Tyr His Asp Glu Phe |
| 35 40 45  |

|   |
|---|
| Lys Arg Trp Ile Tyr Leu Asn Asp Gln Asn Leu Cys Ile Pro Ala Ser |
| 50 55 60  |

|   |
|---|
| Ser Ser Phe Val Tyr Gly Ala Val Pro Ile Gly Ala Ser Ile Tyr Val |
| 65 70 75 80   |

|   |
|---|
| Ile Gly Asp Leu Asp Thr Gly Thr Asn Tyr Asp Tyr Val Arg Glu Phe |
| 85 90 95  |

|   |
|---|
| Lys Arg Ser Thr Gly Thr Trp His Xaa Xaa Lys Pro Leu Leu Pro Ser |
| 100 105 110   |

## 4688

Asp Leu Arg Arg Thr Gly Cys Ala Ala Leu Arg Ile Ala Asn Cys Lys  
 115 120 125

Leu Phe Arg Leu Gln Leu Gln Gln Gly Leu Phe Arg Ile Arg Val His  
 130 135 140

Ser Pro  
 145

<210> 5243

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5243

Asp Gly Pro Ala Lys Cys Arg Pro Leu Leu Leu Asn Lys Asn Ile Leu  
 1 5 10 15

Lys Pro Leu Phe Leu Leu His Gly Gln Glu Ala Ala Arg Glu Ser Ala  
 20 25 30

Arg Val Pro Trp Ser Glu Leu Ala Ser Pro Cys Leu Leu Cys Pro Arg  
 35 40 45

Ala Ala Trp Phe Leu Val Gln Cys Ser Asp Thr Ala Cys Pro Ser Pro  
 50 55 60

Thr Ser Ser Gln Gln His Leu Leu Ser Leu Ala Ala Met Ala Met Thr  
 65 70 75 80

Thr Pro Glu Lys Gln Leu Gln Gly Pro Ser Gln Ile Leu Phe Cys Leu  
 85 90 95

His Ala Ser Ala Gly Cys Arg Tyr  
 100

<210> 5244

<211> 461

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (60)

<223> Xaa equals any of the naturally occurring L-amino acids

4689

<220>  
 <221> SITE  
 <222> (103)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (135)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (241)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5244

Ile Glu Thr Ser Asn Lys Asn Asp Met Thr Ile Asp Ile Leu His Ala  
 1 5 10 15

Asp Gly Glu Arg Pro Asn Val Leu Glu Asn Leu Asp Asn Ser Lys Glu  
 20 25 30

Lys Thr Val Gly Ser Glu Ala Ala Lys Thr Glu Asp Thr Val Leu Cys  
 35 40 45

Ser Ser Asp Thr Asp Glu Glu Cys Leu Ile Ile Xaa Thr Glu Cys Lys  
 50 55 60

Asn Asn Ser Asp Gly Lys Thr Ala Val Val Gly Ser Asn Leu Ser Ser  
 65 70 75 80

Arg Pro Ala Ser Pro Asn Ser Ser Ser Gly Gln Ala Ser Val Gly Asn  
 85 90 95

Gln Thr Asn Thr Ala Cys Xaa Pro Glu Glu Ser Cys Val Leu Lys Lys  
 100 105 110

Pro Ile Lys Arg Val Tyr Lys Lys Phe Asp Pro Val Gly Glu Ile Leu  
 115 120 125

Lys Met Gln Asp Glu Leu Xaa Lys Pro Ile Ser Arg Lys Val Pro Glu  
 130 135 140

Leu Pro Leu Met Asn Leu Glu Asn Ser Lys Gln Pro Ser Val Ser Glu  
 145 150 155 160

Gln Leu Ser Gly Pro Ser Asp Ser Ser Ser Trp Pro Lys Ser Gly Trp  
 165 170 175

Pro Ser Ala Phe Gln Lys Pro Lys Gly Arg Leu Pro Tyr Glu Leu Gln  
 180 185 190

## 4690

Asp Tyr Val Glu Asp Thr Ser Glu Tyr Leu Ala Pro Gln Glu Gly Asn  
 195 200 205  
 Phe Val Tyr Lys Leu Phe Ser Leu Gln Asp Leu Leu Leu Val Arg  
 210 215 220  
 Cys Ser Val Gln Arg Ile Glu Thr Arg Pro Arg Ser Lys Lys Arg Lys  
 225 230 235 240  
 Xaa Ile Arg Arg Gln Phe Pro Val Tyr Val Leu Pro Lys Val Glu Tyr  
 245 250 255  
 Gln Ala Cys Tyr Gly Val Glu Ala Leu Thr Glu Ser Glu Leu Cys Arg  
 260 265 270  
 Leu Trp Thr Glu Ser Leu Leu His Ser Asn Ser Ser Phe Tyr Val Gly  
 275 280 285  
 His Ile Asp Ala Phe Thr Ser Lys Leu Phe Leu Leu Glu Glu Ile Thr  
 290 295 300  
 Ser Glu Glu Leu Lys Glu Lys Leu Ser Ala Leu Lys Ile Ser Asn Leu  
 305 310 315 320  
 Phe Asn Ile Leu Gln His Ile Leu Lys Lys Leu Ser Ser Leu Gln Glu  
 325 330 335  
 Gly Ser Tyr Leu Leu Ser His Ala Ala Glu Asp Ser Ser Leu Leu Ile  
 340 345 350  
 Tyr Lys Ala Ser Asp Gly Lys Val Thr Arg Thr Ala Tyr Asn Leu Tyr  
 355 360 365  
 Lys Thr His Cys Gly Leu Pro Gly Val Pro Ser Ser Leu Ser Val Pro  
 370 375 380  
 Trp Val Pro Leu Asp Pro Ser Leu Leu Leu Pro Tyr His Ile His His  
 385 390 395 400  
 Gly Arg Ile Pro Cys Thr Phe Pro Pro Lys Ser Leu Asp Thr Thr Thr  
 405 410 415  
 Gln Gln Lys Ile Gly Gly Thr Arg Met Pro Thr Arg Ser His Arg Asn  
 420 425 430  
 Pro Val Ser Met Glu Thr Lys Ser Ser Cys Leu Pro Ala Gln Gln Val  
 435 440 445  
 Glu Thr Glu Gly Val Ala Pro His Lys Arg Lys Ile Thr  
 450 455 460

## 4691

&lt;210&gt; 5245

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5245

```

Leu Tyr Ser Pro Phe Gln Phe Phe Leu Pro Leu Phe Leu Phe Leu Ser
 1             5             10             15

Cys Ser Pro Leu Ser Ala Leu Gln Asp Phe Pro Ala Thr Trp Val Leu
          20             25             30

Val Leu Lys Leu Pro Tyr Thr Phe Thr Val Phe Phe Leu Leu Pro Phe
          35             40             45

Phe Leu Ile Phe Ile Ser Phe Leu Asn Phe Leu Ser Leu Ser Ser Leu
 50             55             60

Pro Phe Leu Leu Ser Phe Leu Phe Val His Val Ile Ser Ser Pro Cys
 65             70             75             80

Leu Pro Pro Leu Thr Phe Leu Tyr Phe Leu Ser Leu Pro Pro Tyr Tyr
          85             90             95

Ser Phe Leu Phe Leu Val Leu Gln Phe Asn Tyr Phe Lys His Ile Thr
          100            105            110

His Lys Ala Cys His Ser Leu Asp Phe
          115            120

```

&lt;210&gt; 5246

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5246

```

Thr Leu His Thr Ala His Pro Ser Pro Val Leu Thr Leu Cys Ser Tyr
 1             5             10             15

His Ser Leu Ala Ala Cys His Ala Val Gly Leu Gln Ile Cys Thr His
          20             25             30

Lys Phe Leu Arg Lys Ser Leu His Glu His His Leu Ala Ile Phe Cys
          35             40             45

Thr Asp Gln Thr Arg Asp Leu Asn Val Phe Gln His Lys Arg Ile Thr

```



## 4692

50

55

60

Ser Glu Trp Trp Ser Val Arg Ile Leu Ala Lys Val Met Val Ile  
 65 70 75

&lt;210&gt; 5247

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5247

Leu Glu Glu Thr Leu Phe Leu Gln Gly Thr Lys Gln Leu Tyr Phe Ser  
 1 5 10 15

Thr Asp Met His Tyr Phe His Cys Glu Phe Thr Phe Leu Leu His Val  
 20 25 30

Gln Met Ser Leu Phe Val Phe Phe Phe Cys Asn Ile Asn Cys Asn Asp  
 35 40 45

Val Leu Pro Gly Ile His Glu Asn Ile Ile Lys Thr His Phe  
 50 55 60

&lt;210&gt; 5248

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (23)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5248

Pro Gly Glu Pro Lys Pro Thr Pro Arg Gly Lys Pro Gly Gln Thr Gly  
 1 5 10 15

## 4693

Gly Pro Pro Ser Trp Tyr Xaa Pro Xaa Lys Leu Ile Ala Leu Xaa Gly  
                     20                    25                    30

Gly Gly Glu Lys Thr Pro Thr His Leu Val Arg Glu Val Phe Cys Leu  
                     35                    40                    45

Tyr Cys Gly Val Arg Ala Glu Glu Lys Ser Leu Phe Phe Pro Leu Arg  
                     50                    55                    60

Leu Cys Phe Lys Glu Gln Gly Arg Gly Lys Phe Cys Gly Phe  
                     65                    70                    75

<210> 5249

<211> 80

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (46)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (73)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (79)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5249

Lys Leu Thr Lys Cys Pro Val Arg Trp Leu Arg Pro Ala Ile Pro Ala  
                     1                    5                    10                    15

Leu Trp Glu Ala Glu Val Gly Gly Ser Leu Glu Ala Arg Ser Leu Arg  
                     20                    25                    30

Thr Ala Trp Pro Thr Trp Arg Asn Pro Val Ser Thr Ile Xaa Thr Lys  
                     35                    40                    45

Phe Asn Gln Ala Trp Trp Trp Ala Pro Val Val Pro Ala Tyr Leu Gly  
                     50                    55                    60

Asp Leu Ser His Glu Glu Ser Leu Xaa Pro Ser Trp Val Gly Xaa Leu  
                     65                    70                    75                    80

## 4694

&lt;210&gt; 5250

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5250

```

Pro Pro Gly Ser Asn Lys Pro Pro Ala Ser Ala Tyr Gln Val Ala Glu
 1              5              10              15

Thr Thr Gly Thr Tyr His Arg Ala Cys Leu Ile Phe Lys Ile Phe Tyr
      20              25              30

Lys Asp Glu Val Ser Leu Cys Cys Pro Gly Trp Ser Gln Thr Pro Asn
      35              40              45

Leu Lys Gln Ser Ala His Val Gly Leu Pro Lys Cys
      50              55              60

```

&lt;210&gt; 5251

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5251

```

Val Tyr Gly Asn Tyr Leu Ile Ile Leu Lys Arg Thr His Phe Ser Cys
 1              5              10              15

Lys Tyr Val Thr Ser Glu Phe Lys Lys Ile Thr Leu Asn Thr Leu Ile
      20              25              30

Phe Ala Ala Phe Phe Ser Val Tyr Ile Thr Cys Leu Leu Ser Glu Trp
      35              40              45

Glu Tyr Met Cys Ala Ser Gln His Leu Leu Leu Lys Cys Val Ile Phe
      50              55              60

Ile Cys Gln Thr Gly
      65

```

&lt;210&gt; 5252

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4695

&lt;400&gt; 5252

Arg His Lys Asp Thr Phe Arg Ile Val Lys Thr Leu Ser Ile Glu Lys  
 1 5 10 15

Phe Leu Asn Glu Thr Val Ser Lys Lys Ser Phe Ala Ser Arg Phe Leu  
 20 25 30

Arg Gly Ala Ile Lys Lys Arg Thr Leu Pro Val Val Thr Ala Ala Ala  
 35 40 45

Ile Ala Pro Leu Tyr Cys  
 50

&lt;210&gt; 5253

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (66)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (67)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5253

Phe His Leu Gln Gln Leu Leu Glu Arg Lys Pro Asp Asn Tyr Met Thr  
 1 5 10 15

Leu Ser Arg Leu Ile Asp Leu Leu Arg Arg Cys Gly Lys Leu Glu Asp  
 20 25 30

Val Pro Arg Phe Phe Ser Met Ala Glu Lys Arg Asn Ser Arg Ala Lys  
 35 40 45

Leu Glu Pro Gly Phe Gln Tyr Cys Lys Gly Leu Tyr Leu Trp Tyr Thr  
 50 55 60

Gly Xaa Xaa Asn Asp Ala Leu Arg His Phe Asn Lys Ala Arg Lys Asp  
 65 70 75 80

Arg Asp Trp Gly Gln Asn Ala Leu Tyr Asn Met Ile Glu Asn Leu Phe  
 85 90 95

Glu Ser Arg

## 4696

&lt;210&gt; 5254

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (77)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5254

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Leu | Trp | Asn | Ala | Met | Ile | His | Pro | Leu | Cys | Asn | Met | Thr | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gly | Val | Val | Trp | Tyr | Gln | Gly | Glu | Ser | Asn | Ile | Asn | Tyr | Asn | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Tyr | Asn | Cys | Thr | Phe | Pro | Ala | Leu | Ile | Glu | Asp | Trp | Arg | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Phe | His | Arg | Gly | Ser | Gln | Gly | Gln | Thr | Glu | Arg | Phe | Phe | Pro | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Val | Gln | Leu | Ser | Ser | Asp | Leu | Ser | Lys | Lys | Xaa | Ser | Asp | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Phe | Pro | Gln | Ile | Arg | Trp | His | Gln | Thr | Ala | Asp | Phe | Gly | Tyr | Val |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asn | Pro | Lys | Met | Pro | Asn | Thr | Phe | Met | Ala | Val | Ala | Met | Asp | Leu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Asp | Arg | Asp | Ser | Pro | Phe | Gly | Ser | Ile | His | Pro | Arg | Asp | Lys | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Cys | Gly | Leu | Ser | Ala | Ala | Phe | Gly | Gly | Pro | Cys | Ser | Gly | Leu | Trp |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

&lt;210&gt; 5255

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4697

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (35)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (36)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5255

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Pro | Leu | Leu | Pro | Lys | Val | Leu | Gly | Leu | Arg | His | His | Thr | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Lys | Leu | Lys | Ala | Ile | Phe | Ser | Asn | Ser | His | Gln | Cys | Gly | Tyr | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Lys | Xaa | Xaa | Trp | Phe | Leu | Gly | His | Ile | Trp | Tyr | Gln | Asn | Val | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Tyr | Pro | Tyr | Lys | Tyr | Gly | Met |
|     | 50  |     |     |     |     | 55  |     |

&lt;210&gt; 5256

&lt;211&gt; 434

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (347)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5256

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Asn | Met | Glu | Ala | Thr | Gly | Thr | Asp | Glu | Val | Asp | Lys | Leu | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Lys | Phe | Ile | Ser | Ala | Trp | Asn | Asn | Met | Lys | Tyr | Ser | Trp | Val | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Lys | Thr | Tyr | Phe | Ser | Arg | Asn | Ser | Pro | Val | Leu | Leu | Leu | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Tyr | His | Phe | Lys | Tyr | Glu | Asp | Glu | Asp | Lys | Thr | Leu | Pro | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Gly | Cys | Thr | Ile | Glu | Asp | His | Val | Ile | Ala | Gly | Asn | Val | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

## 4698

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Phe | Arg | Lys | Asp | Phe | Ile | Ser | Arg | Ile | Trp | Leu | Thr | Tyr | Arg | Glu | 85  | 90  | 95  |
| Glu | Phe | Pro | Gln | Ile | Glu | Gly | Ser | Ala | Leu | Thr | Thr | Asp | Cys | Gly | Trp | 100 | 105 | 110 |
| Gly | Cys | Thr | Leu | Arg | Thr | Gly | Gln | Met | Leu | Leu | Ala | Gln | Gly | Leu | Ile | 115 | 120 | 125 |
| Leu | His | Phe | Leu | Gly | Arg | Ala | Trp | Thr | Trp | Pro | Asp | Ala | Leu | Asn | Ile | 130 | 135 | 140 |
| Glu | Asn | Ser | Asp | Ser | Glu | Ser | Trp | Thr | Ser | His | Thr | Val | Lys | Lys | Phe | 145 | 150 | 155 |
| Thr | Ala | Ser | Phe | Glu | Ala | Ser | Leu | Ser | Gly | Glu | Arg | Glu | Phe | Lys | Thr | 165 | 170 | 175 |
| Pro | Thr | Ile | Ser | Leu | Lys | Glu | Thr | Ile | Gly | Lys | Tyr | Ser | Asp | Asp | His | 180 | 185 | 190 |
| Glu | Met | Arg | Asn | Glu | Val | Tyr | His | Arg | Lys | Ile | Ile | Ser | Trp | Phe | Gly | 195 | 200 | 205 |
| Asp | Ser | Pro | Leu | Ala | Leu | Phe | Gly | Leu | His | Gln | Leu | Ile | Glu | Tyr | Gly | 210 | 215 | 220 |
| Lys | Lys | Ser | Gly | Lys | Lys | Ala | Gly | Asp | Trp | Tyr | Gly | Pro | Ala | Val | Val | 225 | 230 | 235 |
| Ala | His | Ile | Leu | Arg | Lys | Ala | Val | Glu | Glu | Ala | Arg | His | Pro | Asp | Leu | 245 | 250 | 255 |
| Gln | Gly | Ile | Thr | Ile | Tyr | Val | Ala | Gln | Asp | Cys | Thr | Val | Pro | Val | Arg | 260 | 265 | 270 |
| Leu | Gly | Gly | Glu | Arg | Thr | Asn | Thr | Asp | Tyr | Leu | Glu | Phe | Val | Lys | Gly | 275 | 280 | 285 |
| Ile | Leu | Ser | Leu | Glu | Tyr | Cys | Val | Gly | Ile | Ile | Gly | Gly | Lys | Pro | Lys | 290 | 295 | 300 |
| Gln | Ser | Tyr | Tyr | Phe | Ala | Gly | Phe | Gln | Asp | Asp | Ser | Leu | Ile | Tyr | Met | 305 | 310 | 315 |
| Asp | Pro | His | Tyr | Cys | Gln | Ser | Phe | Val | Asp | Val | Ser | Ile | Lys | Asp | Phe | 325 | 330 | 335 |
| Pro | Leu | Glu | Thr | Phe | His | Cys | Pro | Ser | Pro | Xaa | Lys | Met | Ser | Phe | Arg | 340 | 345 | 350 |

## 4699

Lys Met Asp Pro Ser Cys Thr Ile Gly Phe Tyr Cys Arg Asn Val Gln  
 355 360 365  
 Asp Phe Lys Arg Ala Ser Glu Glu Ile Thr Lys Met Leu Lys Phe Ser  
 370 375 380  
 Ser Lys Glu Lys Tyr Pro Leu Phe Thr Phe Val Asn Gly His Ser Arg  
 385 390 395 400  
 Asp Tyr Asp Phe Thr Ser Thr Thr Thr Asn Glu Glu Asp Leu Phe Ser  
 405 410 415  
 Glu Asp Glu Lys Lys Gln Leu Lys Arg Phe Ser Thr Glu Glu Phe Val  
 420 425 430  
 Leu Leu

<210> 5257  
 <211> 68  
 <212> PRT  
 <213> Homo sapiens

<400> 5257  
 Tyr Ile Ser Cys Ile Phe Tyr Asp Phe Ser Ile Lys His Ser Gly Val  
 1 5 10 15  
 Leu Ala Phe Pro Gly Lys Gly Lys Leu Val Cys Ala Leu Val Lys Tyr  
 20 25 30  
 Leu Asn Ser Asn Val Pro Tyr Ser Ala Cys Ile His Phe Val Lys Ser  
 35 40 45  
 Phe Val Val Leu Leu Glu Gln Phe Ser Lys Ala Asp Phe Met Pro Tyr  
 50 55 60  
 Leu Ile Glu Ile  
 65

<210> 5258  
 <211> 76  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE



## 4700

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5258

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Gly | Arg | Gly | Ile | Met | Ala | Cys | Gln | His | Ser | Leu | Cys | Pro | Xaa |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Arg | Pro | Arg | Met | Arg | Ser | Cys | Gln | His | Asn | Ile | His | Pro | Phe |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gln | Met | Glu | Ser | Gly | Thr | Leu | Thr | Gln | Pro | Ser | Val | Leu | Asn | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ala | Ile | Ile | Ala | Thr | Cys | Ser | Val | Val | Asn | Val | Asn | Pro | Gln | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Asn | Tyr | Phe | Arg | Pro | Asn | Ile | Leu | Phe | Leu |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |

&lt;210&gt; 5259

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (15)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (83)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (84)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5259

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Phe | Gly | Arg | Pro | Ser | Val | Tyr | His | Ala | Ala | Ile | Val | Xaa | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Phe | Phe | Ala | Trp | Gly | Leu | Leu | Thr | Thr | Pro | Met | Leu | Thr | Val |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | His | Glu | Thr | Phe | Ser | Gln | His | Thr | Phe | Leu | Met | Asn | Gly | Leu | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

**4701**

Gln Gly Val Lys Gly Leu Leu Ser Phe Leu Ser Ala Pro Leu Ile Gly  
 50 55 60

Ala Leu Ser Asp Val Trp Gly Arg Lys Pro Phe Leu Leu Gly Thr Val  
 65 70 75 80

Phe Phe Xaa Xaa Phe Pro Ile Pro Leu Met Arg Ile Ser Pro Cys Phe  
 85 90 95

Leu Lys Lys Lys Thr His Gln Trp Thr  
 100 105

&lt;210&gt; 5260

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5260

Leu Arg Tyr Ser Leu Ile Phe Tyr Ile Ala Ala Leu Phe Phe Leu Phe  
 1 5 10 15

Cys Ser Ile Ser Glu Ile Ser His Val Tyr Thr Leu Asn Ile Asn Ile  
 20 25 30

Arg Asn His Ala Ile Ile Ser Thr Met Tyr Leu Val Val Ser Tyr Ile  
 35 40 45

Cys Ile Thr Leu Leu His Phe Ala Asn  
 50 55

&lt;210&gt; 5261

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (15)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5261

Leu Ile Tyr Lys Tyr Asn Tyr Thr Lys Leu Gln Asn Ile Val Xaa Met  
 1 5 10 15

Lys Thr Lys Asn Leu Val Pro Asn Ile  
 20 25

## 4702

&lt;210&gt; 5262

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5262

Ser Asp Lys Ala Leu Ala Ser Asp Pro Cys Gln Asn Ser Ile Asn Gly  
 1 5 10 15

Cys Leu Glu Val Asp Val His Ile Tyr Ser Glu Met Phe Cys His Leu  
 20 25 30

Arg Pro Met Arg Arg Leu Cys Leu Glu Lys Ile Phe Pro His Trp Phe  
 35 40 45

Pro Phe Ser Arg Ala Leu Ser Gly Ala Glu Ala Val Asn Ala Leu Arg  
 50 55 60

Pro Phe Tyr Phe Ala Val His Pro Asp Phe Phe Gly Gln His Pro Val  
 65 70 75 80

Glu Arg Asp Asp Thr Trp Lys Ser Phe Gln Cys Pro Ser Asp Phe Ser  
 85 90 95

Leu

&lt;210&gt; 5263

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4703

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (24)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (35)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5263

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Cys | Arg | Thr | Xaa | Ser | Arg | Met | Ala | Ile | Phe | Glu | Leu | Val | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Xaa | Arg | Xaa | Leu | Tyr | Leu | Xaa | Gln | Lys | Ile | Leu | Cys | Glu | Leu | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | His | Xaa | Asp | Leu | Phe | Val | Asp | Val | Asn | Lys | His | Leu | Phe | Asp | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Cys | Ala | Ile | Asn | His | Phe | Val | Lys | Leu | Leu | Lys | Asp | Ile | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Cys | Phe | Leu | Asn | Ile | Arg | Ala | Lys | Asn | Val | Ala | Gln | Asn | Pro | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | His | His | Ser | Glu | Arg | Thr | Asp | Met | Lys | Thr | Leu | Ser | Arg | Lys | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ser | Ser | Val | Gln | Asp | Tyr | Lys | Cys | Ser | Ser | Phe | Ala | Asn | Thr | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ser | Lys | Phe | Arg | His | Leu | Leu | Ser | Asn | Asp | Gly | Tyr | Pro | Phe | Lys |  |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |  |

&lt;210&gt; 5264

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5264

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ser | Phe | Ile | Leu | His | Leu | Phe | Ile | Gln | Leu | Ile | Phe | Val | Glu | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | His | Val | Pro | Asp | Ile | Ile | Lys | Cys | Trp | Val | Tyr | Gly | Asn | Glu | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Asn | Arg | Gln | Gly | Pro | Cys | Pro | Phe | Arg | Gly | Asp | Arg |  |  |  |  |
|     |     | 35  |     |     |     |     |     | 40  |     |     |     |  |  |  |  |

## 4704

&lt;210&gt; 5265

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (68)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (81)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (110)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5265

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Ile | Asp | Thr | Asn | Arg | Ile | Arg | Thr | Glu | Asn | Gly | Ser | Ile | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Val | Val | Pro | Gln | Glu | His | Asn | Thr | Leu | Pro | Val | Ser | Gln | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Lys | Pro | Asn | Leu | Thr | Ser | Glu | His | Thr | Ser | Tyr | Gly | Leu | Ile |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Lys | Pro | Tyr | Val | Arg | Pro | Leu | Pro | Pro | Ser | Tyr | Leu | Asp | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Tyr | Leu | Xaa | Met | Pro | Lys | Arg | Arg | Lys | Phe | Leu | Thr | Asp | Arg | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Cys | Ser | Asp | Gln | Asp | Asn | Val | Tyr | Lys | Lys | Ser | Val | Lys | Arg |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Cys | Gly | Lys | Cys | Leu | Thr | Thr | Tyr | Cys | Asn | Ala | Xaa | Ala | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Glu | Ala | His | Leu | Ala | Gln | Lys | Lys | Cys | Gln | Thr | Leu | Phe | Gly | Ile |  |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |  |

&lt;210&gt; 5266

## 4705

&lt;211&gt; 225

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5266

Leu Pro Gly Pro Gly Ala Cys Pro Glu Gly Val Trp Thr Leu Asn Ser  
 1 5 10 15

Ala Pro Thr Gln Gly Pro Thr Ala Ala Pro Gly Ala Cys His Pro Gly  
 20 25 30

Leu Leu Gly Arg Gly Gln Gly Leu Xaa Leu Gly Leu Pro Ser Thr Pro  
 35 40 45

Gly Thr Pro Thr Pro Thr Pro His Thr Ser Leu Gly Ser Pro Val Ser  
 50 55 60

Ser Asp Pro Val His Met Ser Pro Leu Glu Pro Arg Gly Gly Gln Gly  
 65 70 75 80

Asp Gly Leu Ala Leu Val Leu Ile Leu Ala Phe Cys Val Ala Gly Ala  
 85 90 95

Ala Ala Leu Ser Val Ala Ser Leu Cys Trp Cys Arg Leu Gln Arg Glu  
 100 105 110

Ile Arg Leu Thr Gln Lys Ala Asp Tyr Ala Thr Ala Lys Ala Pro Gly  
 115 120 125

Ser Pro Ala Ala Pro Arg Ile Ser Pro Gly Asp Gln Arg Leu Ala Gln  
 130 135 140

Ser Ala Glu Met Tyr His Tyr Gln His Gln Arg Gln Gln Met Leu Cys  
 145 150 155 160

Leu Glu Arg His Lys Glu Pro Pro Lys Glu Leu Asp Thr Ala Ser Ser  
 165 170 175

Asp Glu Glu Asn Glu Asp Gly Asp Phe Thr Val Tyr Glu Cys Pro Gly  
 180 185 190

Leu Ala Pro Thr Gly Glu Met Glu Val Arg Asn Pro Leu Phe Asp His  
 195 200 205

Ala Ala Leu Ser Ala Pro Leu Pro Ala Pro Ser Ser Pro Pro Ala Leu  
 210 215 220

## 4706

Pro  
225

<210> 5267

<211> 104

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (75)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (79)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (80)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5267

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Phe | Cys | Val | Ala | Gly | Ala | Ala | Ala | Leu | Ser | Val | Ala | Ser | Leu | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Cys | Arg | Leu | Gln | Arg | Glu | Ile | Arg | Leu | Thr | Gln | Lys | Ala | Asp | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Thr | Ala | Lys | Ala | Pro | Gly | Ser | Pro | Ala | Ala | Pro | Arg | Ile | Ser | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Asp | Gln | Arg | Leu | Ala | Gln | Ser | Ala | Glu | Met | Tyr | His | Tyr | Gln | His |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Arg | Gln | Gln | Met | Leu | Cys | Leu | Glu | Arg | Xaa | Glu | Val | Gly | Xaa | Xaa |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Thr | Ser | Arg | Leu | Gly | His | Trp | His | Leu | Glu | Gly | Met | Gly | Arg | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

Gln Arg Ser Pro Pro Thr Gln Ala

## 4707

100

&lt;210&gt; 5268

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5268

Glu Pro His Leu Ser Met Cys Lys Arg Cys Ile Pro Arg Pro Val Asn  
 1 5 10 15  
 Gly Ser Leu Arg Lys Phe Cys Met Gln Ala Val Phe Ser Ser Arg Thr  
 20 25 30  
 Asn Asn Trp Glu Ile Ser Lys Lys Leu His Arg Ser Pro Ala Trp Cys  
 35 40 45  
 Cys Ser Ser Leu Tyr Phe Thr Leu Asn Ser Gly Trp Glu Glu Lys Gly  
 50 55 60  
 Asn Lys Leu Trp Leu Phe Pro Ser Gln Lys Tyr Cys Gly Thr Ser Thr  
 65 70 75 80  
 Phe Gln Cys Phe Ala Phe  
 85

&lt;210&gt; 5269

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5269

His Cys Glu Cys Cys Ser Asp Ile Leu Tyr Arg His Leu Thr Ala Gln  
 1 5 10 15  
 Asn Phe Cys Phe Ile Ser Cys Leu Thr Tyr Gln Lys Gly Arg Lys Val  
 20 25 30  
 Gly Met Ile Ser Lys Val Lys Lys Lys Lys Lys Lys Thr Phe Tyr  
 35 40 45  
 Arg Lys Leu Ile Asn Asn His Val Ile Leu Gln Phe Cys Tyr Gln Asn  
 50 55 60  
 Phe Pro Gln Glu Phe Ser Asn Ile Ser Ser Ala Met Trp Leu  
 65 70 75



## 4708

&lt;210&gt; 5270

&lt;211&gt; 46

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5270

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Val | Arg | Thr | Tyr | Xaa | Ala | Lys | Leu | Leu | Ala | Phe | Gly | Ile | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Asn | Val | Gly | Phe | Lys | Pro | Leu | Glu | Thr | Ala | Val | Ile | Gly | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Gly | Gln | Gly | Pro | Ala | Gly | Leu | Val | Gly | Thr | Pro | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |

&lt;210&gt; 5271

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5271

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ile | Phe | Cys | Arg | Asp | Lys | Leu | Ser | Leu | Cys | Phe | Pro | Gly | Trp | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Ser | Gly | Leu | Lys | Arg | Phe | Phe | Cys | Leu | Ser | Leu | Gln | Asn | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Asp | Tyr | Ser | Met | Ser | His | His | Ala | Gln | Leu | Tyr | Ser | Leu | Leu | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

Tyr

&lt;210&gt; 5272

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5272

Lys Glu Ala Val Phe Pro Arg Lys Thr His Gln Pro Gly Leu Arg Lys

## 4709

|   |    |    |    |
|---|----|----|----|
| 1   | 5  | 10 | 15 |
| Lys Met Gly Pro Pro Ser Glu Gly Met Trp Trp Trp Lys His Ser Thr | 20 | 25 | 30 |
| Gly Pro Gly Phe Gly Ala Ser Phe Pro Pro Pro Gln Pro Met Leu Thr | 35 | 40 | 45 |
| Leu Pro Gly Lys Ala Pro Gly Ser Pro Gln Gly Arg Arg Lys Lys Arg | 50 | 55 | 60 |
| Gly Leu Cys Ser   | 65 |    |    |

&lt;210&gt; 5273

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5273

|   |    |    |    |    |
|---|----|----|----|----|
| Arg Thr Lys Arg Thr His Ala Gly Gly Arg Ser Arg Xaa Val Asp Pro | 1  | 5  | 10 | 15 |
| Arg Ala Ala Glu Phe Gly Thr Ala Arg Leu Gly Ser Leu Cys Lys Thr | 20 | 25 | 30 |    |
| Ser Pro Phe Leu Glu Met Met Met Pro Ser Lys Pro Gly Pro Gly Pro | 35 | 40 | 45 |    |
| Asp Leu Gln Ala His Thr Trp Pro Val Ala Leu Arg Ser Pro Gly     | 50 | 55 | 60 |    |

&lt;210&gt; 5274

&lt;211&gt; 257

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (120)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4710

<220>  
 <221> SITE  
 <222> (139)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (141)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (256)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5274  
 Cys Ser Ile Asn Gly Thr Leu Tyr Gln Pro Gly Ala Val Val Ser Ser  
 1 5 10 15  
 Ser Leu Cys Glu Thr Cys Arg Cys Glu Leu Pro Gly Gly Pro Pro Ser  
 20 25 30  
 Asp Ala Phe Val Val Ser Cys Glu Thr Gln Ile Cys Asn Thr His Cys  
 35 40 45  
 Pro Val Gly Phe Glu Tyr Gln Glu Gln Ser Gly Gln Cys Cys Gly Thr  
 50 55 60  
 Cys Val Gln Val Ala Cys Val Thr Asn Thr Ser Lys Ser Pro Ala His  
 65 70 75 80  
 Leu Phe Tyr Pro Gly Glu Thr Trp Ser Asp Ala Gly Asn His Cys Val  
 85 90 95  
 Thr His Gln Cys Glu Lys His Gln Asp Gly Leu Val Val Val Thr Thr  
 100 105 110  
 Lys Lys Ala Cys Pro Pro Leu Xaa Cys Ser Leu Asp Glu Ala Arg Met  
 115 120 125  
 Ser Lys Asp Gly Cys Cys Arg Phe Cys Pro Xaa Pro Xaa Pro Pro Tyr  
 130 135 140  
 Gln Asn Gln Ser Thr Cys Ala Val Tyr His Arg Ser Leu Ile Ile Gln  
 145 150 155 160  
 Gln Gln Gly Cys Ser Ser Ser Glu Pro Val Arg Leu Ala Tyr Cys Arg  
 165 170 175  
 Gly Asn Cys Gly Asp Ser Ser Ser Met Tyr Ser Leu Glu Gly Asn Thr  
 180 185 190

## 4711

Val Glu His Arg Cys Gln Cys Cys Gln Glu Leu Arg Thr Ser Leu Arg  
 195 200 205

Asn Val Thr Leu His Cys Thr Asp Gly Ser Ser Arg Ala Phe Ser Tyr  
 210 215 220

Thr Glu Val Glu Glu Cys Gly Cys Met Gly Arg Arg Cys Pro Ala Pro  
 225 230 235 240

Gly Asp Thr Gln His Ser Glu Glu Ala Glu Pro Glu Pro Ser Gln Xaa  
 245 250 255

Ala

&lt;210&gt; 5275

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5275

Asn Phe Lys Ser Ile His Phe Thr His Leu Phe Cys Leu Phe Thr Lys  
 1 5 10 15

Leu Phe Leu Lys Arg Ala Leu Cys His Gln Asn Met Leu Asp Leu Ile  
 20 25 30

Ile Leu Arg Ser Leu Leu Ser Lys Tyr Leu Val Tyr Ile Phe Ser Leu  
 35 40 45

Ala Asn Leu Cys Val Tyr Ile His Ser Ile  
 50 55

&lt;210&gt; 5276

&lt;211&gt; 205

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5276

Asn Ser Ala Glu Ala Val Glu Arg Asn Leu Val Arg Val Ala Glu Val  
 1 5 10 15

Trp Leu Asp Glu Tyr Lys Glu Leu Phe Tyr Gly His Gly Asp His Leu  
 20 25 30

Ile Asp Gln Gly Leu Asp Val Gly Asn Leu Thr Gln Gln Arg Glu Leu

## 4712

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Arg Lys Lys Leu Lys Cys Lys Ser Phe Lys Trp Tyr Leu Glu Asn Val |     |     |
| 50  | 55  | 60  |
| Phe Pro Asp Leu Arg Ala Pro Ile Val Arg Ala Ser Gly Val Leu Ile |     |     |
| 65  | 70  | 75  |
| Asn Val Ala Leu Gly Lys Cys Ile Ser Ile Glu Asn Thr Thr Val Ile |     |     |
| 85  | 90  | 95  |
| Leu Glu Asp Cys Asp Gly Ser Lys Glu Leu Gln Gln Phe Asn Tyr Thr |     |     |
| 100   | 105 | 110 |
| Trp Leu Arg Leu Ile Lys Cys Gly Glu Trp Cys Ile Ala Pro Ile Pro |     |     |
| 115   | 120 | 125 |
| Asp Lys Gly Ala Val Arg Leu His Pro Cys Asp Asn Arg Asn Lys Gly |     |     |
| 130   | 135 | 140 |
| Leu Lys Trp Leu His Lys Ser Thr Ser Val Phe His Pro Glu Leu Val |     |     |
| 145   | 150 | 155 |
| Asn His Ile Val Phe Glu Asn Asn Gln Gln Leu Leu Cys Leu Glu Gly |     |     |
| 165   | 170 | 175 |
| Asn Phe Ser Gln Lys Ile Leu Lys Val Ala Ala Cys Asp Pro Val Lys |     |     |
| 180   | 185 | 190 |
| Pro Tyr Gln Lys Trp Lys Phe Glu Lys Tyr Tyr Glu Ala             |     |     |
| 195   | 200 | 205 |

&lt;210&gt; 5277

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (170)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (172)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4713

&lt;222&gt; (177)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (183)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (188)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5277

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Ala | Met | Asp | Ser | Gln | Lys | Glu | Ala | Leu | Gln | Arg | Ile | Ile | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Ala | Asn | Lys | Asn | Asp | Glu | Ile | Gln | Asn | Phe | Ile | Asp | Thr | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | His | Thr | Leu | Lys | Gly | Val | Gln | Glu | Asn | Ser | Ser | Asn | Ile | Leu | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Asp | Glu | Glu | Phe | Asp | Ser | Leu | Tyr | Ser | Ile | Leu | Asp | Glu | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Ser | Met | Ile | Asn | Cys | Ile | Lys | Gln | Glu | Gln | Ala | Arg | Lys | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Glu | Leu | Gln | Ser | Gln | Ile | Ser | Gln | Cys | Asn | Asn | Ala | Leu | Glu | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Glu | Glu | Leu | Leu | Glu | Phe | Ala | Thr | Arg | Ser | Leu | Asp | Ile | Lys | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Glu | Phe | Ser | Lys | Ala | Ala | Arg | Gln | Ile | Lys | Asp | Arg | Val | Thr |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ser | Ala | Phe | Arg | Leu | Ser | Leu | Lys | Pro | Lys | Val | Ser | Asp | Asn |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | His | Leu | Met | Val | Asp | Phe | Ser | Gln | Glu | Arg | Gln | Met | Leu | Gln |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Lys | Phe | Phe | Ala | Ser | Pro | Gln | Xaa | Ser | Xaa | Ile | Asp | Pro | Val |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ile | Val | Trp | Val | Gly | Xaa | Ile | Thr | Ser | Cys | Xaa |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     |

## 4714

&lt;210&gt; 5278

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (27)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5278

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Lys | Ala | Ile | Asp | Asp | Leu | Tyr | Val | Gln | Ile | Lys | Glu | Lys | His | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Glu | Lys | Asp | Cys | His | Phe | Tyr | Val | Asn | Xaa | Lys | Val | Leu | Ser | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Leu | Lys | Lys | Arg | Arg | Phe | Tyr | Lys | Ser | Lys | Glu | Ser | Leu | Asn |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Thr | Met | Asn | Lys | Gly |
|     |     |     |     | 50  |

&lt;210&gt; 5279

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5279

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ile | Tyr | Ile | Phe | Leu | Lys | Pro | Glu | Leu | Lys | Met | Leu | Gln | Ala | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Tyr | Ser | Phe | Ile | Ser | Gly | Ser | Leu | Thr | Val | Val | Ser | Leu | Gly | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ile | Ser | Leu | Lys | Glu | Lys | Leu | Ile | Met | Tyr | Val | Gly | Cys | Gln | Asp |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Cys | Leu | Glu | Ser | Lys | Cys | Asp | Phe | Tyr | Phe |
|     |     |     | 50  |     |     | 55  |     |     |     |     |

&lt;210&gt; 5280

&lt;211&gt; 84

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4715

&lt;400&gt; 5280

```

Asn Leu Ser Val Ala Leu Cys Leu Cys Ser Pro Gln Arg Lys Val Thr
 1              5              10              15

Arg Arg Gly Val Gln Phe Pro Arg Pro Gly Pro Tyr Arg Pro Pro Thr
              20              25              30

Gly Ala Pro Leu Cys Cys Tyr Ser Phe Cys Gln Leu Glu Ala Asp Gly
              35              40              45

Asp Gln Ala Leu Glu Lys Ala Arg Pro Glu Asp Gly Arg Phe Leu Ser
              50              55              60

Gly Gly Glu Leu Cys Leu Thr Asp Leu Asn Ile His Ser Val Leu Leu
 65              70              75              80

Cys Glu Asn Lys

```

&lt;210&gt; 5281

&lt;211&gt; 114

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5281

```

Ser Lys Gly Ile Leu Val Phe Asn Leu Asp Arg Leu Arg Cys Gln Glu
 1              5              10              15

Lys Leu Gln Ser Gln Val Ser Arg Gln Pro Pro Gly Trp Ser Leu Ala
              20              25              30

Pro Pro Pro Pro Pro Leu Pro Thr Phe Ser Asn Val Leu His Ala Gly
              35              40              45

Ser Trp Gly Val Trp Gly Lys Gly Leu Pro Ala Ser Phe Arg Arg Leu
              50              55              60

Arg Phe Gly Gly Lys Ile Asn Leu Gly Asp His Pro Gly Arg Gly Ala
              65              70              75              80

Ser Val Asp Arg Trp Glu Glu Lys Lys Thr Ser Tyr Leu Gly Gly Gly
              85              90              95

Thr Ser Arg Phe Leu Ile Leu Ser Phe Phe Val Ala Pro Pro His Cys
              100              105              110

Pro Phe

```



## 4716

&lt;210&gt; 5282

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5282

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Leu | Asn | Thr | Glu | Arg | Asp | Phe | Leu | Ser | Cys | Lys | Lys | Phe | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ala | Lys | Gln | Lys | Glu | Asn | Ile | Tyr | Phe | Leu | Ser | Leu | Gln | Glu | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Thr | Lys | His | Tyr | Ser | Phe | Ile | Ala | Ala | Ile | Leu | Leu | Thr | Lys | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Val | His | Asn | Ile | Lys | Asn | Leu | Thr |
|     | 50  |     |     |     |     | 55  |     |     |

&lt;210&gt; 5283

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5283

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Lys | Gly | Asn | Lys | Ser | Trp | Ser | Ser | Thr | Ala | Val | Ala | Ala | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Leu | Val | Asp | Pro | Pro | Gly | Cys | Arg | Asn | Ser | Ala | Arg | Asp | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Cys | Met | Cys | Phe | Phe | Pro | Asp | Ser | Tyr | Ile | Ile | Gly | Tyr | Leu | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Thr | Pro | Tyr | Thr | Tyr | Tyr | Phe | Gln | Asn | Leu | Ser | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |

&lt;210&gt; 5284

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4717

<220>  
 <221> SITE  
 <222> (63)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (74)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (77)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (78)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (83)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (86)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (89)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5284  
 Lys Thr Tyr Lys Ile Gln Arg Ser Tyr Arg Ser Cys Ala Leu Tyr Asn  
           1                  5                  10                  15  
 Val Ile Ile Val Thr Lys Gly Leu Ser Thr Trp Lys Phe Leu Asn Asp  
                   20                  25                  30  
 Leu Leu Asn Asn Ser Phe Lys Gly Glu Ile Lys Ile Asn Cys Lys Leu  
           35                  40                  45  
 Phe Arg Ile Asn Lys Asn Phe Ser Lys Ala Glu Glu Phe Tyr Xaa Arg  
           50                  55                  60  
 Gly Val Arg Gly Asn Cys Ile Asp Phe Xaa Leu Leu Xaa Xaa Glu Glu  
           65                  70                  75                  80

Arg Lys Xaa Lys Glu Xaa Ile Lys Xaa Phe Lys Ser  
85 90

Cys Glu Asn Ser Gln Ser Arg Asn Ala Glu Leu Cys Glu Ile Pro Pro  
195 200 205

## 4719

Thr Ser Asp Thr Lys Ser Asp Thr Ala Thr Gly Gly Glu Ser Ala Gly  
 210 215 220  
 His Ala Thr Ser Ser Gln Glu Pro Ser Gly Cys Ser Asp Gln Arg Pro  
 225 230 235 240  
 Ala Glu Asp Leu Asn Ile Arg Val Glu Arg Leu Thr Lys Lys Leu Glu  
 245 250 255  
 Glu Arg Arg Glu Glu Lys Arg Lys Glu Glu Glu Gln Arg Glu Ile Lys  
 260 265 270  
 Lys Glu Ile Glu Arg Arg Lys Thr Gly Lys Glu Met Leu Asp Tyr Lys  
 275 280 285  
 Arg Lys Gln Glu Glu Glu Leu Thr Lys Arg Met Leu Glu Glu Arg Asn  
 290 295 300  
 Arg Glu Lys Ala Glu Asp Arg Ala Ala Arg Glu Arg Ile Lys Gln Gln  
 305 310 315 320  
 Ile Ala Leu Asp Arg Ala Glu Arg Ala Ala Arg Phe Ala Lys Thr Lys  
 325 330 335  
 Glu Glu Val Glu Ala Ala Lys Ala Ala Ala Leu Leu Ala Lys Gln Ala  
 340 345 350  
 Glu Met Glu Val Lys Arg Glu Ser Tyr Ala Arg Glu Arg Ser Thr Val  
 355 360 365  
 Ala Arg Ile Gln Phe Arg Leu Pro Asp Gly Ser Ser Phe Thr Asn Gln  
 370 375 380  
 Phe Pro Ser Asp Ala Pro Leu Glu Glu Ala Arg Gln Phe Ala Ala Gln  
 385 390 395 400  
 Thr Val Gly Asn Thr Tyr Gly Asn Phe Ser Leu Ala Thr Met Phe Pro  
 405 410 415  
 Arg Arg Glu Phe Thr Lys Glu Asp Tyr Lys Lys Lys Leu Leu Asp Leu  
 420 425 430  
 Glu Leu Ala Pro Ser Ala Ser Val Val Leu Leu Pro Ala Gly Arg Pro  
 435 440 445  
 Thr Ala Ser Ile Val His Ser Ser Ser Gly Asp Ile Trp Thr Leu Leu  
 450 455 460  
 Gly Thr Val Leu Tyr Pro Phe Leu Ala Ile Trp Arg Leu Ile Ser Asn  
 465 470 475 480

## 4720

Phe Leu Phe Ser Asn Pro Pro Pro Thr Gln Thr Ser Val Arg Val Thr  
485 490 495

Ser Ser Glu Pro Pro Asn Pro Ala Ser Ser Ser Lys Ser Glu Lys Arg  
500 505 510

Glu Pro Val Arg Lys Arg Val Leu Glu Lys Arg Gly Asp Asp Phe Lys  
515 520 525

Lys Glu Gly Lys Ile Tyr Arg Leu Arg Thr Gln Asp Asp Gly Glu Asp  
530 535 540

Glu Asn Asn Thr Trp Asn Gly Asn Ser Thr Gln Gln Met  
545 550 555

<210> 5286

<211> 43

&lt;212&gt; PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

&lt;222&gt; (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

&lt;221&gt; SITE

<222> (39)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5286

Asn Asp Gln Asn Pro Glu Ser Gln Trp Ser Asn Asn Lys His Thr Gln  
1 5 10 15

Ile Asp Cys Leu Ile Asn Ser Phe Xaa Leu Val Phe Lys Ser Asn Thr  
20 25 30

Phe Phe Lys Ser Pro Leu Xaa Lys Met Ile Ile  
35 40

<210> 5287

$\langle 211 \rangle$  143

&lt;212&gt; PRT

<213> Homo sapiens

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

## 4721

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5287

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gly | Trp | Xaa | Xaa | Cys | Pro | Xaa | Pro | Gly | Pro | Gly | Arg | Arg | Thr | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Arg | Gln | Lys | Glu | Thr | Leu | Gln | Ser | Ala | Phe | Pro | Ser | Met | Cys | Ala |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Cys | Pro | Ser | Glu | Pro | Ala | Asp | Xaa | Arg | Gly | Gly | Lys | Asp | Thr | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Glu | Gln | Asn | Leu | Gln | Asp | Thr | Gln | Ser | Cys | Leu | Phe | Ala | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Pro | Tyr | Ala | Cys | Pro | Val | Phe | Ser | Leu | Lys | Ala | Phe | Thr | His | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Val | Thr | Trp | Asn | Val | Leu | Ser | Ile | Thr | Pro | Ala | Val | Met | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Glu | Leu | Asp | Gly | Arg | Pro | Leu | His | Gly | Ser | Leu | Lys | Arg | Ser |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Pro | Ser | Asn | Trp | Val | Cys | His | Arg | His | Thr | Gly | Ser | Cys | Leu | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Val | Leu | Pro | Val | Val | Ile | Val | Met | Arg | Ile | Val | Val | Leu | His | Pro |  |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |  |

&lt;210&gt; 5288

&lt;211&gt; 48

&lt;212&gt; PRT

## 4722

&lt;213&gt; Homo sapiens

&lt;400&gt; 5288

```

Ser Gly Gln Glu Pro Gly Phe Gln Gln Arg Glu Leu Glu Asn Glu Pro
 1             5             10             15

Arg Gly Ala Gly Ala Gly Gly Val Gly Glu Cys Gln Arg Ala Gly Met
          20             25             30

Asn Trp Gln Val Ala Trp Arg Gly Gly Leu Val Pro Lys Pro Val Leu
 35             40             45

```

&lt;210&gt; 5289

&lt;211&gt; 232

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5289

```

Pro Ala Ser Ala Thr Thr Arg Thr Gly Pro Arg Pro Gly Pro Ala Pro
 1             5             10             15

Arg Cys Pro Leu Pro Ala Pro Gly His Ser Cys Thr Gln Ala Pro Pro
          20             25             30

Arg Glu His Thr Ala Val His Thr Arg Glu Lys Gln Gln Leu Ala Ser
 35             40             45

Leu Val Gly Thr Met Leu Ala Tyr Ser Leu Thr Tyr Arg Gln Glu Arg
 50             55             60

Thr Pro Asp Gly Gln Tyr Ile Tyr Arg Leu Glu Pro Asn Val Glu Glu
 65             70             75             80

Leu Cys Arg Phe Pro Glu Leu Pro Ala Arg Lys Pro Leu Thr Tyr Gln
          85             90             95

Thr Lys Gln Leu Ile Ala Arg Glu Ile Glu Val Glu Lys Met Arg Arg
          100             105             110

Ala Glu Ala Ser Ala Arg Val Glu Asn Ser Pro Gln Val Asp Gly Ser
          115             120             125

Pro Pro Gly Leu Glu Gly Leu Leu Gly Gly Ile Gly Glu Lys Gly Val
          130             135             140

His Arg Pro Ala Pro Arg Asn His Glu Gln Arg Leu Glu His Ile Met

```

## 4723

145                      150                      155                      160  
 Arg Arg Ala Ala Arg Glu Glu Gln Pro Glu Lys Asp Phe Phe Gly Arg  
                                  165                      170                      175  
 Val Val Val Arg Ser Thr Ala Val Pro Ser Ala Gly Asp Thr Ala Pro  
                                  180                      185                      190  
 Glu Gln Asp Ser Val Glu Arg Arg Met Gly Thr Ala Val Gly Arg Ser  
                                  195                      200                      205  
 Glu Val Trp Phe Arg Phe Asn Glu Gly Val Ser Asn Ala Val Arg Arg  
                                  210                      215                      220  
 Ser Leu Tyr Ile Arg Asp Leu Leu  
 225                      230

<210> 5290  
 <211> 92  
 <212> PRT  
 <213> Homo sapiens

<400> 5290  
 Ser Ile Thr Cys His Arg Glu Ser Glu Phe Leu Tyr Cys Leu Pro Ala  
   1                                  5                                  10                                  15  
 Ala Arg Thr Lys Ser Glu Trp Trp Gly Pro Arg Ser Ser Gln Leu Gly  
                                   20                                  25                                  30  
 Glu Lys Ala Leu Pro Asp Pro Gly Thr Arg Gly Leu Gly Gln Glu Ala  
                                   35                                  40                                  45  
 Gly Arg Met Gly Gly Cys Asp His Arg His Thr His Thr Arg Ser Leu  
                                   50                                  55                                  60  
 Ser Ser Gly Lys Gly Phe Pro Glu Ala Phe Ala His Thr Leu Asn Glu  
   65                                  70                                  75                                  80  
 Val Phe Ser Cys Gln Ala Lys Pro Pro Glu Glu Lys  
                                   85                                  90

<210> 5291  
 <211> 40  
 <212> PRT  
 <213> Homo sapiens

<220>



## 4724

<221> SITE  
<222> (38)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (40)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5291  
Thr Ile Lys Cys Leu Leu Leu Tyr Lys Lys Lys Lys Lys Lys Lys Lys  
1 5 10 15  
Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
20 25 30  
Lys Lys Lys Lys Gly Xaa Pro Xaa  
35 40

<210> 5292  
<211> 50  
<212> PRT  
<213> Homo sapiens

<400> 5292  
Val Glu Asn Leu Gln Arg Asn Asp Gly Cys Lys Trp Thr Cys Lys Pro  
1 5 10 15  
Lys Leu Gly Ile Gly Glu Val Arg Leu Thr Arg Leu Leu Val Arg Val  
20 25 30  
Leu Leu Asn Ser Leu Leu Met Arg Arg Cys Leu Asp Lys Tyr Lys Leu  
35 40 45

Arg Lys  
50

<210> 5293  
<211> 57  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (6)  
<223> Xaa equals any of the naturally occurring L-amino acids

## 4725

&lt;400&gt; 5293

Lys Pro Leu Ala Lys Xaa Arg Gly Ile Phe Phe Phe Ile Phe Lys Cys  
1 5 10 15

Leu Gly Thr Lys Pro Lys Ser Lys Arg Leu Thr Lys His Val Ser Leu  
20 25 30

Lys Ala Thr Cys Ile Leu Gln Tyr Asn Ile Lys Leu Phe Asn Leu Arg  
35 40 45

Asn Leu Val Leu Leu Ile Cys Thr Phe  
50 55

&lt;210&gt; 5294

&lt;211&gt; 40

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5294

Arg Thr Phe Met Lys Arg Trp Asn Cys Ser Tyr Lys Phe Phe Leu Leu  
1 5 10 15

Leu Leu Phe Leu Asn Met Pro Trp Asn Asn Ser Thr Ile Phe Ser Pro  
20 25 30

Ser Ile Asn Leu Ser Asn Lys Ala  
35 40

&lt;210&gt; 5295

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (37)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4726

&lt;400&gt; 5295

Asn Cys Glu Asp Ile Leu Lys Leu Cys Leu Val Tyr Lys Tyr Lys Asp  
 1 5 10 15

Phe His Thr Asp Asn Tyr Gln Ile Pro Asn Thr Phe Thr Gly Lys Lys  
 20 25 30

Pro Ser Val Lys Xaa Leu Pro Gly Ser Ser Ser Leu Lys Phe Ser Xaa  
 35 40 45

Xaa

&lt;210&gt; 5296

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (27)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (56)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (77)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (79)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5296

Thr Thr Leu Xaa Arg Arg Ser Ser Leu Leu Asn Tyr Ile His Pro Asp  
 1 5 10 15

Cys Gly Asp Asn His Thr Pro Gln Phe Arg Xaa Tyr Tyr Tyr Tyr Gln

## 4727

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 20  |     | 25  |     | 30  |     |     |     |     |     |     |     |     |     |     |
| Ser | Val | Gln | Gly | Leu | Cys | Trp | Leu | Ile | Leu | Phe | Phe | Tyr | Pro | Leu | Tyr |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| His | Tyr | Ser | Pro | Ile | Ser | Ser | Xaa | Thr | Phe | Ile | Ser | Lys | Asn | Leu | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Val | Trp | His | Leu | Ser | Leu | Asp | Met | Glu | Cys | Phe | Phe | Xaa | Lys | Xaa |     |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     |     |

&lt;210&gt; 5297

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5297

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Phe | Gly | Leu | Tyr | Leu | Val | Leu | Asp | Pro | Glu | Leu | Pro | Phe | Ser | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Tyr | Leu | Asn | Asp | Tyr | Tyr | Tyr | Phe | Ile | Ser | Leu | Phe | Tyr | Thr | His | Thr |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Thr | His | Thr | His | Arg | Glu | Met | Leu | Phe | Met | Arg | Phe | Cys | Ile | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| His | Ile | Leu | His | Ile | Leu | Tyr | Met | Ile | Asp | Glu |     |     |     |     |     |
|     | 50  |     |     |     |     | 55  |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 5298

&lt;211&gt; 183

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (107)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (111)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (123)

## 4728

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5298

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Phe | Glu | Arg | Gln | Thr | Thr | Ala | Ala | Val | Gly | Val | Leu | Lys | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | His | Cys | Gly | Glu | Trp | Pro | Asp | Gln | Pro | Arg | Leu | Thr | Lys | Asp | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Cys | Phe | His | Ala | Glu | Asp | Phe | Leu | Glu | Val | Val | Gln | Arg | Met | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Asp | Leu | His | Glu | Pro | Pro | Leu | Ser | Gln | Cys | Val | Gln | Trp | Val | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asp | Ala | Lys | Leu | Asn | Gln | Leu | Arg | Arg | Glu | Gly | Ile | Arg | Tyr | Ala | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ile | Gln | Leu | Tyr | Asp | Asn | Asp | Ile | Tyr | Phe | Ile | Pro | Arg | Asn | Val | Val |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| His | Gln | Phe | Lys | Thr | Val | Ser | Ala | Val | Cys | Xaa | Leu | Ala | Trp | Xaa | Ile |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Arg | Leu | Lys | Leu | Tyr | His | Ser | Glu | Glu | Asp | Xaa | Ser | Gln | Asn | Thr | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Thr | His | Glu | Thr | Gly | Thr | Ser | Ser | Asp | Ser | Thr | Ser | Ser | Val | Leu | Gly |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | His | Thr | Asp | Asn | Met | Ile | Cys | Ala | Val | Ser | Lys | Pro | Pro | Trp | Ile |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Leu | Phe | Phe | Gln | Ile | Asn | Phe | Ile | Leu | Asn | Met | Asn | Tyr | Ser | Arg | Leu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Asn | Met | Asn | Leu | Leu | His | Leu |     |     |     |     |     |     |     |     |     |
|     |     |     | 180 |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 5299

<211> 68

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (20)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4729

&lt;400&gt; 5299

Ile Ser His Phe Trp Glu Gln Thr Pro Ile Lys Val Pro Gly Asp Tyr  
 1 5 10 15

Leu Gln Trp Xaa Ala Glu Gln Lys Ile Ser Ala Val Leu Ile Ile Val  
 20 25 30

Val Thr Trp Val Thr Pro Pro Asn Thr Leu Cys Glu Leu Ser Glu Ile  
 35 40 45

Phe Gly Asn Phe Leu Met Tyr Ile Leu Glu Ile Leu Asn Val Gln Ile  
 50 55 60

Trp Ser Ser Ile  
 65

&lt;210&gt; 5300

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5300

Trp Gln Ser Val His Arg Ser Trp Leu Leu Ser Leu Leu Asn Leu Cys  
 1 5 10 15

Lys Arg Ser Leu Ser Asp Glu Gly Arg Ile Met Val Leu Leu Ala Leu  
 20 25 30

Ala Phe Pro Phe Cys Asp Leu Lys Ala Ser Ser Leu Arg Pro His Ser  
 35 40 45

Met Ala Pro Val Pro Tyr Ser His Ser Cys Leu Leu Lys Leu Pro Thr  
 50 55 60

Leu Leu Asn Cys Phe Trp Gly Glu Glu His Phe Phe Leu Lys Gln Asn  
 65 70 75 80

Arg Tyr Met Lys Gln Tyr Thr Gly Ile Asn Thr Asn Ile  
 85 90

&lt;210&gt; 5301

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

## 4730

<222> (46)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (47)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (48)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (57)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (65)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (71)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5301  
Phe Ser Pro Lys Ala Val Leu Leu Arg Leu Cys Phe Thr Ser Ile Tyr  
1 5 10 15  
Lys Leu Tyr Val Lys Cys Cys His Lys Glu Val Ser Glu Ala Val Gly  
20 25 30  
His Thr Gln Gly Arg Ala Glu Lys Tyr Leu Val Val Cys Xaa Xaa Xaa  
35 40 45  
Lys Pro Trp Met Ala Ala Ala Thr Xaa Pro Ala Tyr Pro Phe Thr Ala  
50 55 60  
Xaa Val Tyr Ser Leu Arg Xaa Leu Thr Thr Arg  
65 70 75

<210> 5302  
<211> 82  
<212> PRT  
<213> Homo sapiens

## 4731

&lt;400&gt; 5302

Glu Leu Pro Ser Lys Arg Gln Ala Phe Val Ile Ser Met Glu Phe Glu  
 1 5 10 15  
 Gly Ser Trp Thr Ile Cys Lys Asp Ile Leu Thr Cys Ser Leu Arg Ser  
 20 25 30  
 Leu Ser Ser Ser Lys Arg Met Ala Arg Val Cys Gly Ile Ile Leu Ser  
 35 40 45  
 Thr Tyr Cys Cys Phe Phe Val Val Leu Leu Met Gln Val Ile Ile Tyr  
 50 55 60  
 Phe Leu Gly Val Ile Trp Arg Lys Ser Met Arg Gln Ala Cys Phe Ser  
 65 70 75 80  
 Pro Val

&lt;210&gt; 5303

&lt;211&gt; 272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (220)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5303

Asp Cys Val Thr Glu Leu Ser Val His His Arg Asn Asn Arg Gln Thr  
 1 5 10 15  
 Met Glu Asp Leu Ile Ser Leu Trp Gln Tyr Asp His Leu Thr Ala Thr  
 20 25 30  
 Tyr Leu Leu Leu Leu Ala Lys Lys Ala Arg Gly Lys Pro Val Arg Leu  
 35 40 45  
 Arg Leu Ser Ser Phe Ser Cys Gly Gln Ala Ser Ala Thr Pro Phe Thr  
 50 55 60  
 Asp Ile Lys Ser Asn Asn Trp Ser Leu Glu Asp Val Thr Ala Ser Asp  
 65 70 75 80  
 Lys Asn Tyr Val Ala Gly Leu Ile Asp Tyr Asp Trp Cys Glu Asp Asp  
 85 90 95  
 Leu Ser Thr Gly Ala Ala Thr Pro Arg Thr Ser Gln Phe Thr Lys Tyr



## 4732

|   |     |     |
|---|-----|-----|
| 100   | 105 | 110 |
| Trp Thr Glu Ser Asn Gly Val Glu Ser Lys Ser Leu Thr Pro Ala Leu |     |     |
| 115   | 120 | 125 |
| Cys Arg Thr Pro Ala Asn Lys Leu Lys Asn Lys Glu Asn Val Tyr Thr |     |     |
| 130   | 135 | 140 |
| Pro Lys Ser Ala Val Lys Asn Glu Glu Tyr Phe Met Phe Pro Glu Pro |     |     |
| 145   | 150 | 155 |
| Lys Thr Pro Val Asn Lys Asn Gln His Lys Arg Glu Ile Leu Thr Thr |     |     |
| 165   | 170 | 175 |
| Pro Asn Arg Tyr Thr Thr Pro Ser Lys Ala Arg Asn Gln Cys Leu Lys |     |     |
| 180   | 185 | 190 |
| Glu Thr Pro Ile Lys Ile Pro Val Asn Ser Thr Gly Thr Asp Lys Leu |     |     |
| 195   | 200 | 205 |
| Met Thr Gly Val Ile Ser Pro Glu Arg Arg Cys Xaa Gln Trp Asn Trp |     |     |
| 210   | 215 | 220 |
| Ile Ser Thr Lys His Ile Trp Arg Arg Leu Gln Lys Glu Arg Glu Pro |     |     |
| 225   | 230 | 235 |
| Lys Cys Leu Gly Ala Leu Lys Gly Gly Trp Ile Arg Leu Ser Leu Cys |     |     |
| 245   | 250 | 255 |
| Ser Pro Gly Ala Lys Gly Arg Val Leu Pro Glu Thr Gly Pro Glu Asp |     |     |
| 260   | 265 | 270 |

&lt;210&gt; 5304

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5304

|   |
|---|
| Phe Leu Gly Ala Pro Ser Ile Cys Ala Gly Asp Glu Glu Gly Thr Glu |
| 1 5 10 15   |
| Ile Asp Thr Leu Gln Phe Arg Leu Gln Val Arg Cys Thr Arg Glu Pro |
| 20 25 30  |
| Pro Cys Cys   |
| 35  |

4733

&lt;210&gt; 5305

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (38)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5305

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Phe | Leu | Lys | Gly | Ser | Lys | Ala | Phe | Ala | Cys | Tyr | Leu | Cys | Phe | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Lys | Pro | Lys | Gln | Lys | Ile | Met | Pro | Leu | Cys | Gln | Thr | Phe | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Thr | Ser | Thr | Xaa | Ser | Gln | Leu | Xaa | Lys | Tyr | Asn | Val | Tyr | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gln | Phe | Tyr | Asn | Leu | Ser | Met | Ala | Gln | Ile | Leu | Glu | Thr | Tyr | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Asp | His | Arg | Asp | Ile | Val | Val | Asn | Ile | Trp | Ala | Trp | Asn | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Leu | Gly | Ser | Asn | Leu | Ser | Phe | Lys | Ser | Lys | Lys | Leu | Asn | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

Leu Ala Glu

&lt;210&gt; 5306

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (38)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4734

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5306

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Phe | Asn | Phe | Pro | Ala | Ser | Pro | Glu | Ala | Arg | Tyr | Gly | His | Asn | Thr |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Phe | Cys | Pro | Arg | Arg | Leu | Ser | Lys | Ile | Val | Trp | Asp | Phe | Gln | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Phe | Leu | Lys | Ser | Xaa | Ala | Gly | Leu | Ser | Ser | Cys | Leu | Leu | Pro | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Trp | Leu | Glu | Xaa | Lys | Asp | His | Gly | Arg | Arg | Pro | Ser | Ser | His | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |
|-----|-----|
| Gly | Arg |
| 65  |     |

&lt;210&gt; 5307

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5307

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Tyr | His | Cys | Ala | Ser | Arg | Tyr | Arg | Arg | Arg | Ala | Arg | Gln | Thr |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Xaa | Pro | Ser | Tyr | Thr | Arg | Ser | Ala | Asp | Leu | Pro | Ser | Arg | Thr | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Val | Glu | Asp | Leu | Leu | Glu | Leu | Ser | Arg | Ala | Phe | Trp | Val | Gly | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gly | Gly | Gly | Arg | Val | Arg | Val | Leu | Gly | Gly | Thr | Glu | Ala | His | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gly | Ile | Pro | Pro | Glu | Ser | Met | Asp | His | Tyr | Ala | Asp | Gly | His | Arg |
|     | 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | His | Cys | His | Leu | Gly | Tyr | Arg | Cys | His | Gly | Arg | Pro | Gln | Arg |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4735

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 85  |  | 90  |  | 95  |
| Glu Gly Leu Pro Arg Cys Leu Lys Val Pro Pro Val Asn Leu Ser Ser |     |  |     |  |     |
|   | 100 |  | 105 |  | 110 |
| Val Ser Val Pro Phe Pro Val Thr His Arg Ala Gly Met Glu Phe Asn |     |  |     |  |     |
|   | 115 |  | 120 |  | 125 |
| Gly Cys Ser Gly Gln Thr Leu Val His Gly Gln Thr Ser Leu Leu Trp |     |  |     |  |     |
|   | 130 |  | 135 |  | 140 |
| Ile Leu Gln Asp   |     |  |     |  |     |
| 145   |     |  |     |  |     |

<210> 5308  
 <211> 77  
 <212> PRT  
 <213> Homo sapiens

<400> 5308  
 Met Lys Ile Phe Lys Leu Glu Leu Glu Glu Gly Val Val Glu Glu Gln  
 1 5 10 15  
 Gly Val Leu Leu His Pro Glu Val Val Gly Leu Leu Leu Pro Ala Val  
 20 25 30  
 Glu Pro Val Ile His Arg Glu Glu Val Leu Asp Gln Gln Glu Ala Phe  
 35 40 45  
 Glu Val Arg Glu Glu Val Pro Asn Asn Lys Glu Ala Ala Gly Arg Glu  
 50 55 60  
 Lys Gly Ser Arg Pro Val Leu Thr Cys Tyr Asn Glu Asp  
 65 70 75

<210> 5309  
 <211> 704  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE

<222> (3)

<400> 5309

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Thr | Glu | Ile | Phe | Val | Gly | Lys | Ile | Pro | Arg | Asp | Leu | Phe | Glu |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |

## 4737

Asp Glu Leu Val Pro Leu Phe Glu Lys Ala Gly Pro Ile Trp Asp Leu  
 260 265 270

Arg Leu Met Met Asp Pro Leu Thr Gly Leu Asn Arg Gly Tyr Ala Phe  
 275 280 285

Val Thr Phe Cys Thr Lys Glu Ala Ala Gln Glu Ala Val Lys Leu Tyr  
 290 295 300

Asn Asn His Glu Ile Arg Ser Gly Lys His Ile Gly Val Cys Ile Ser  
 305 310 315 320

Val Ala Asn Asn Arg Leu Phe Val Gly Ser Ile Pro Lys Ser Lys Thr  
 325 330 335

Lys Glu Gln Ile Leu Glu Glu Phe Ser Lys Val Thr Glu Gly Leu Thr  
 340 345 350

Asp Val Ile Leu Tyr His Gln Pro Asp Asp Lys Lys Lys Asn Arg Gly  
 355 360 365

Phe Cys Phe Leu Glu Tyr Glu Asp His Lys Thr Ala Ala Gln Ala Arg  
 370 375 380

Arg Arg Leu Met Ser Gly Lys Val Lys Val Trp Gly Asn Val Gly Thr  
 385 390 395 400

Val Glu Trp Ala Asp Pro Ile Glu Asp Pro Asp Pro Glu Val Met Ala  
 405 410 415

Lys Val Lys Val Leu Phe Val Arg Asn Leu Ala Asn Thr Val Thr Glu  
 420 425 430

Glu Ile Leu Glu Lys Ala Phe Ser Gln Phe Gly Lys Leu Glu Arg Val  
 435 440 445

Lys Lys Leu Lys Asp Tyr Ala Phe Ile His Phe Asp Glu Arg Asp Gly  
 450 455 460

Ala Val Lys Ala Met Glu Glu Met Asn Gly Lys Asp Leu Glu Gly Glu  
 465 470 475 480

Asn Ile Glu Ile Val Phe Ala Lys Pro Pro Asp Gln Lys Arg Lys Glu  
 485 490 495

Arg Lys Ala Gln Arg Gln Ala Ala Lys Asn Gln Met Tyr Asp Asp Tyr  
 500 505 510

Tyr Tyr Tyr Gly Pro Pro His Met Pro Pro Pro Thr Arg Gly Arg Gly  
 515 520 525

## 4738

Arg Gly Gly Arg Gly Gly Tyr Gly Tyr Pro Pro Asp Tyr Tyr Gly Tyr  
 530 535 540  
 Glu Asp Tyr Tyr Asp Tyr Tyr Gly Tyr Asp Tyr His Asn Tyr Arg Gly  
 545 550 555 560  
 Gly Tyr Glu Asp Pro Tyr Tyr Gly Tyr Glu Asp Phe Gln Val Gly Ala  
 565 570 575  
 Arg Gly Arg Gly Gly Arg Gly Ala Arg Gly Ala Ala Pro Ser Arg Gly  
 580 585 590  
 Arg Gly Ala Ala Pro Pro Arg Gly Arg Ala Gly Tyr Ser Gln Arg Gly  
 595 600 605  
 Gly Pro Gly Ser Ala Arg Gly Val Arg Gly Ala Arg Gly Gly Ala Gln  
 610 615 620  
 Gln Gln Arg Gly Arg Gly Val Arg Gly Ala Arg Gly Gly Arg Gly Gly  
 625 630 635 640  
 Asn Val Gly Gly Lys Arg Lys Ala Asp Gly Tyr Asn Gln Pro Asp Ser  
 645 650 655  
 Lys Arg Arg Gln Thr Asn Asn Gln Asn Trp Gly Ser Gln Pro Ile Ala  
 660 665 670  
 Gln Gln Pro Leu Gln Gly Gly Asp His Ser Gly Asn Tyr Gly Tyr Lys  
 675 680 685  
 Ser Glu Asn Gln Glu Phe Tyr Gln Asp Thr Phe Gly Gln Gln Trp Lys  
 690 695 700

&lt;210&gt; 5310

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4739

&lt;222&gt; (23)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5310

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Tyr | Ala | Leu | Ser | Asn | Thr | Thr | Xaa | Tyr | Arg | Glu | Lys | Leu | Val | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Val | Pro | Val | Arg | Xaa | Phe | Pro | Gly | Arg | Pro | Thr | Arg | Pro | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Glu | Gln | Asp | Ser | Val | Ser | Lys | Lys | Asn | Lys | Asn | Lys | Asn | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Glu | Gly | Gln | Ala | Gln | Val | Lys | Tyr | Pro | Ile | Phe | Ile | Leu | Ser |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Arg | Gly | Ile | Lys | Lys |
| 65  |     |     |     |     |

&lt;210&gt; 5311

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5311

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ser | Asn | Cys | Pro | Lys | Leu | Trp | Pro | Lys | Lys | Ala | Pro | Ser | Asn | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Cys | Pro | Phe | Asp | Met | Ala | His | His | Ser | Leu | Asn | Thr | Phe | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Trp | His | Asn | Asn | Val | Leu | His | Thr | His | Leu | Val | Phe | Phe | Leu | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Leu | Leu | Asn | Gln | Pro | Phe | Ser | Arg | Gly | Ser | Phe | Leu | Ile | Trp | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Cys | Trp | Asn | Ser | Trp | Tyr | His | Leu | Arg | Thr | Leu | Arg | Arg | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asn | Gln | Ala | Asn | Lys | Leu | Ser | Met | Met | Leu | Leu | Arg | Val | Lys | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Gly | Thr | Lys | Leu | Cys | His | Gly | Asp | Ser | Glu | Leu | Thr | Ser | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Leu | Leu | Ala | Thr |
|     |     |     | 115 |



## 4740

&lt;210&gt; 5312

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (28)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (81)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (89)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5312

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Thr | Ile | Ile | Ile | Ser | Ala | Ser | Pro | Thr | Gln | Val | Thr | Leu | Leu | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Val | Cys | Pro | His | Leu | Glu | Val | Thr | Ala | Xaa | Pro | Trp | Arg | Trp |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ser | Ile | Leu | Ser | Pro | Gly | Cys | Leu | Pro | Pro | Val | Arg | Arg | Pro | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Trp | Cys | Val | Thr | Ser | Gly | Arg | Cys | Gln | Ala | Cys | Phe | Pro | Pro | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Pro | Pro | Gln | Arg | Ala | Arg | Thr | Asn | His | Gln | Cys | His | His | Thr | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Trp | Pro | Glu | Asn | Phe | Met | Asp | Xaa | Phe | Thr | Cys | Ala | Ile | Val | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Leu | Arg | Arg | Pro |
|     |     |     | 100 |

&lt;210&gt; 5313

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

**4741**

&lt;400&gt; 5313

Val Pro Gly Glu Ala Glu Leu Glu Arg Ala Val Glu Ala Phe Pro Leu  
 1 5 10 15

Leu Val Glu Ser Tyr Ala Pro His Ser Gly Ser Glu Leu Gln Leu Leu  
 20 25 30

Ser Arg Thr Thr Thr Glu Ser Gly Ile Arg Val Lys Asn Thr Ser Pro  
 35 40 45

Thr Pro Pro Leu Leu His Pro Arg Arg Phe His Val Phe Asn Leu  
 50 55 60

&lt;210&gt; 5314

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5314

Asp Ser Gly Ser Cys Gly Pro Asp Pro Lys Cys Gly Asp Leu Arg Arg  
 1 5 10 15

Ile Lys Gly Leu Cys Lys Phe Ala Asn Met Phe Thr Leu Ser Gln Thr  
 20 25 30

Ser Arg Ala Trp Phe Ile Asp Arg Ala Arg Gln Ala Arg Glu Glu Arg  
 35 40 45

Leu Val Gln Lys Glu Arg Glu Arg Ala Ala Val Val Ile Gln Ala His  
 50 55 60

Val Arg Ser Phe Leu Cys Arg Ser Arg Leu Gln Arg Asp Ile Arg Arg  
 65 70 75 80

Glu Ile Asp Asp Phe Phe Lys Ala Asp Asp Pro Glu Ser Thr Lys Arg  
 85 90 95

Ser Ala Leu Cys Ile Phe Lys Ile Ala Arg Lys Leu Leu Phe Leu Phe  
 100 105 110

Arg Ile Lys Glu Asp Asn Glu Arg Phe Glu Lys Leu Cys Arg Ser Ile  
 115 120 125

Leu Ser Ser Met Asp Ala Glu Asn Glu Pro Lys Val Trp Tyr Val Ser  
 130 135 140

Leu Ala Cys Ser Lys Asp Leu Thr Leu Leu Trp Ile Gln Gln Ile Lys  
 145 150 155 160

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ile | Leu | Trp | Tyr | Cys | Cys | Asp | Phe | Leu | Lys | Gln | Leu | Lys | Pro | Glu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ile | Leu | Gln | Asp | Ser | Arg | Leu | Ile | Thr | Leu | Tyr | Leu | Thr | Met | Leu | Val |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Thr | Phe | Thr | Asp | Thr | Ser | Thr | Trp | Lys | Ile | Leu | Arg | Gly | Lys | Gly | Glu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ser | Leu | Arg | Pro | Ala | Met | Asn | His | Ile | Cys | Ala | Asn | Ile | Met | Gly | His |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Leu | Asn | Gln | His | Gly | Phe | Tyr | Ser | Val | Leu | Gln | Cys | Cys | Asp | Gly | Leu |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Phe | Pro | Asp | Leu | Val | Ser | Tyr | Ala | Pro | His | Asn | Asn | Pro | Val | Arg | Trp |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ser | Val | Gly | Arg | Ser | Trp | Tyr | Asp | Trp | Gln | Leu | Ser | Arg |     |     |     |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     |     |     |     |

Pro Trp Gly Arg Trp Ser Lys Pro Ser Pro Gln Ala Gly Gly Leu Glu  
50 55 60

## 4743

Ser Thr Arg Lys Gly Ser Thr Trp Phe Tyr Glu Gly Ile Leu Gly Gly  
 65 70 75 80

Ala Thr Pro His Leu Pro Pro Thr Tyr Thr Phe Cys Cys Xaa Lys Cys  
 85 90 95

Leu Ile Pro His Asp Val Ser Leu Ser Phe Gln Gln Lys Lys Val Lys  
 100 105 110

Leu Trp Val Val Glu Pro  
 115

&lt;210&gt; 5316

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (39)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5316

Ala Glu Arg Ser Leu Lys Ile Leu Pro Leu Leu Lys Lys Leu Leu Lys  
 1 5 10 15

Ser Asn Asp His Glu Cys Met Leu Gly His Leu Cys Met Tyr Ile Gln  
 20 25 30

Ile Asp Arg Met Asp Phe Xaa Lys Asn Gly Ile Thr Ile Val Leu Gln  
 35 40 45

Trp Xaa Lys Lys Tyr Gly Ile Leu Pro His Ser Leu Asn Leu Gly Gly  
 50 55 60

Ile Gln Lys Ala Leu Leu Lys Pro Ser Asn Lys Leu Asp Gln Leu Ser  
 65 70 75 80

Leu Asp Leu

&lt;210&gt; 5317

## 4744

<211> 77  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (8)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (17)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (20)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (47)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5317  
 Leu Leu Arg Arg Gly Phe Ile Xaa Gly Phe Tyr Asn Ala Asn Val Val  
           1                  5                  10                  15  
 Xaa Leu Arg Xaa Lys Asn Trp Gln Leu Glu Ser Leu Ser Leu Ile Ser  
                   20                  25                  30  
 Lys Gly Asn Pro Asp Phe Phe Val Asn Tyr Val Arg Gln Val Xaa Tyr  
           35                  40                  45  
 Gly Phe Leu Tyr Glu Leu Gln Phe Thr Val His Gln Ile Leu Val Ser  
           50                  55                  60  
 Glu Glu Leu Ile Tyr Val Lys Cys Leu Lys Ile Tyr Thr  
           65                  70                  75

<210> 5318  
 <211> 65  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (41)  
 <223> Xaa equals any of the naturally occurring L-amino acids

## 4745

&lt;400&gt; 5318

Ser Pro Gly Gly Arg Ser Ser Leu Leu Leu Ser Pro Val Val Ser Arg  
 1 5 10 15

Thr Ser Cys Pro Asp Leu Pro Trp Ser Cys Leu Ser Asp Ser Leu His  
 20 25 30

Gln Gly His Pro Thr Ala Ser Lys Xaa Ala Phe Pro Trp Thr Asn Ala  
 35 40 45

Thr Ala Thr Phe Met Cys Glu Ala Lys Ile Thr Leu Gln Gln Ser Gln  
 50 55 60

Tyr  
 65

&lt;210&gt; 5319

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (131)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (132)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5319

Pro Ala Gly Glu Ser Ser Pro Ala Pro Trp Leu Lys Gly Pro Gly Ala  
 1 5 10 15

His Leu Pro Glu Ala Arg Cys Gly Gly Gly Pro Arg Gly Arg Ser Gln  
 20 25 30

Ala Gln Ser Pro Gln Ser Ser Gly Pro Val Gly Gly Arg Gly Arg Ser  
 35 40 45

Gly Ser Lys Ala Arg Thr Pro Gln Leu Phe Arg Leu Gln Gln Gln Leu  
 50 55 60

Gln Arg Phe Gly His Gly Cys Glu Val Pro Arg Cys Trp Leu Gln Ala  
 65 70 75 80

Ala Arg Glu His Pro Gly Gln Gly Gln Glu Ala Gln Ser Glu Glu Glu

## 4746

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 85  |     | 90  |     | 95  |     |     |     |     |     |     |     |     |     |     |
| Gly | Glu | Gly | Gln | Glu | Gly | Glu | Gly | Gln | Glu | Glu | Gly | Gly | Ser | Pro | Leu |
|     | 100 |     | 105 |     | 110 |     |     |     |     |     |     |     |     |     |     |
| Lys | Gly | Pro | Gly | Gln | Gly | Ser | Leu | Asn | Leu | Pro | Leu | Cys | Leu | Gln | Lys |
|     | 115 |     | 120 |     | 125 |     |     |     |     |     |     |     |     |     |     |
| Lys | Lys | Xaa | Xaa |     |     |     |     |     |     |     |     |     |     |     |     |
|     | 130 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 5320  
 <211> 48  
 <212> PRT  
 <213> Homo sapiens

|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 5320 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Leu        | Ser | Ser | Ile | Cys | Leu | Asn | Ile | Ser | Ser | Leu | Gly | Asp | Ser | Ser | Pro |
| 1          |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Leu        | Cys | Leu | Val | Ala | Asn | Cys | Asn | Ser | Pro | Cys | Gly | Pro | Thr | Glu | Tyr |
|            |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| His        | Ser | Thr | Ala | Phe | Leu | Asp | Ile | Tyr | Asp | Val | Leu | Thr | Ile | Gln | Val |
|            |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

<210> 5321  
 <211> 63  
 <212> PRT  
 <213> Homo sapiens

|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 5321 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Lys        | Glu | Trp | His | Cys | Phe | Tyr | Ile | Phe | Ala | His | Leu | Phe | His | Ala | Arg |
| 1          |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Leu        | Asn | Arg | Asn | Ser | Tyr | Leu | Leu | Val | Arg | Val | Val | Cys | Cys | Asn | Ile |
|            |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr        | Tyr | His | Val | Thr | Ser | Gly | Lys | Pro | His | Cys | Met | His | Val | Arg | Glu |
|            |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly        | Glu | Ser | His | Val | Arg | Val | Val | Ile | Lys | Ile | Val | Leu | Thr | Leu |     |
|            | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

4747

<210> 5322  
 <211> 87  
 <212> PRT  
 <213> Homo sapiens

<400> 5322  
 Met Arg Arg Arg Val Phe Phe Leu His Arg Cys Ser Ile Leu Val Phe  
 1 5 10 15  
 Leu Phe Pro Cys Lys Cys Asn Gln Met Pro Phe Tyr Met Trp Thr Tyr  
 20 25 30  
 Leu Tyr Trp Pro Asn Ile Phe Phe Leu Leu Ser Leu Phe Phe Phe Pro  
 35 40 45  
 Phe Phe Leu Leu Pro Leu Phe Leu Tyr Ser Phe Leu Phe Leu Phe Phe  
 50 55 60  
 Phe Phe Phe Ser Phe Phe Phe Gly Ser Cys Cys Tyr Pro Arg His Phe  
 65 70 75 80  
 Thr Ser Pro Ser Leu Lys Gly  
 85

<210> 5323  
 <211> 79  
 <212> PRT  
 <213> Homo sapiens

<400> 5323  
 Ile Gly Leu Lys Ala Asn Ser Gln Gly Ala Thr Asp Pro Phe His Asn  
 1 5 10 15  
 Arg Met Leu Pro Val Asn Ser Leu Ser Ile Leu Leu Cys Pro Val Ser  
 20 25 30  
 Lys Lys Lys Lys Lys Ser Arg Arg Val Ser Gln Ser Gly His Leu Ile  
 35 40 45  
 Arg Asp Leu Ala Gln Glu Glu Glu Met Gly Arg Glu Ser Asp Gly Glu  
 50 55 60  
 Gln His Ser Pro Trp Glu Pro Glu Val Gly Gly His Arg Ala Pro  
 65 70 75



## 4748

&lt;210&gt; 5324

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5324

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Pro | Ala | Ala | Thr | Ala | Ala | Glu | Thr | Xaa | Ser | Cys | Val | Leu | Cys | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Ala | Ala | Gly | Lys | Ser | Thr | Phe | Ala | Arg | Ala | Leu | Ala | His | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Gln | Glu | Gln | Gly | Trp | Ala | Ile | Gly | Val | Val | Ala | Tyr | Asp | Asp |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Met | Pro | Asp | Ala | Phe | Leu | Ala | Gly | Ala | Arg | Ala | Arg | Pro | Ala | His |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gln | Trp | Lys | Leu | Leu | Arg | Gln | Glu | Leu | Leu | Lys | Tyr | Leu | Glu | Tyr |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Met | Ala | Val | Ile | Asn | Gly | Cys | Gln | Met | Ser | Val | Pro | Pro | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

Arg Thr

&lt;210&gt; 5325

&lt;211&gt; 178

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4749

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (166)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5325

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Lys | Gly | Xaa | Xaa | Leu | Pro | Ile | Xaa | Xaa | Ser | Xaa | Thr | Phe | Met | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Gly | Cys | Cys | Lys | Thr | Cys | Thr | Pro | Arg | Asn | Glu | Thr | Arg | Val | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ser | Thr | Val | Pro | Val | Thr | Thr | Glu | Val | Ser | Tyr | Ala | Gly | Cys | Thr |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Val | Leu | Met | Asn | His | Cys | Ser | Gly | Ser | Cys | Gly | Thr | Phe | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Tyr | Ser | Ala | Lys | Ala | Gln | Ala | Leu | Asp | His | Ser | Cys | Ser | Cys | Cys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Glu | Lys | Thr | Ser | Gln | Arg | Glu | Val | Val | Leu | Ser | Cys | Pro | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Ser | Leu | Thr | His | Thr | Tyr | Thr | His | Ile | Glu | Ser | Cys | Gln | Cys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asp | Thr | Val | Cys | Gly | Leu | Pro | Thr | Gly | Thr | Ser | Arg | Arg | Ala | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Pro | Arg | His | Leu | Gly | Ser | Val | Ser | Gly | Val | Gly | Thr | Ala | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Pro | Ser | Thr | Ala | Leu | Pro | Pro | Pro | Asp | Pro | Leu | Ser | Leu | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Leu | Gly | Phe | Leu | Xaa | Ser | Asp | Ile | Tyr | Cys | Leu | Ser | Phe | Cys | Ser |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

## 4750

Val Leu

&lt;210&gt; 5326

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5326

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Gly | Gln | Thr | Xaa | Xaa | Pro | Ala | Gly | Ala | Arg | Xaa | Gly | Thr | Val |
| 1   |     |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Pro | Gly | Glu | Thr | Ala | Lys | Trp | Lys | Thr | Tyr | Arg | Val | Cys | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Asp | Phe | Thr | Val | Leu | Leu | Gly | His | Phe | Thr | Tyr | Val | Pro | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |
|-----|-----|-----|
| Val | Ile | Asn |
|     | 50  |     |

&lt;210&gt; 5327

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5327

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Leu | Tyr | Lys | Leu | Phe | Phe | Lys | Thr | Lys | Tyr | Phe | Gln | Val | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Thr | Lys | Asn | Ile | Ile | Met | Val | Lys | Thr | Phe | Leu | Phe | Asn | Arg |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4751

20 25 30  
 Leu Val Ile Phe Leu Thr Ser Ile Phe Phe Asn Leu Ser Leu His Lys  
 35 40 45  
 Lys Asn  
 50  
  
 <210> 5328  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (41)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (93)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5328  
 Ser Val Tyr Leu Lys Arg Asn Leu Ile Phe Gln Gly Ser Asn Val Tyr  
 1 5 10 15  
 Val Phe Gln Val Val Leu Pro Thr Phe Ile Leu Glu Arg Arg Ser Leu  
 20 25 30  
 Leu Glu Met Tyr Ala Asp Phe Phe Xaa His Pro Asp Leu Phe Val Arg  
 35 40 45  
 Tyr Leu Thr Glu His Gly Ser Phe Gln Arg Leu Gln Met Leu Leu Ser  
 50 55 60  
 Ser Phe Leu Pro Phe Ile Leu Gln Asp Arg Trp Ile Pro Cys His Leu  
 65 70 75 80  
 Ser Asn Ile Ser Gly Tyr Ser Val Val Leu Asn Asn Xaa Phe Thr Leu  
 85 90 95  
 Val Ala Cys Leu Leu Lys Val Ile Trp Gly Arg Cys  
 100 105

<210> 5329  
 <211> 67

## 4752

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (67)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5329

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Cys | Met | Ser | Leu | Gly | Glu | Cys | Val | Ser | Ser | Thr | Val | Ala | Pro | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Thr | His | Ser | Leu | Lys | Leu | Leu | Leu | Pro | His | Cys | Thr | Tyr | Ser |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Leu | Asn | Trp | Ser | Gln | Thr | Asn | Trp | Asp | Pro | Ala | Gln | Ser | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Gln | Asn | Glu | Val | Leu | Arg | Pro | Gln | Cys | Val | Arg | Thr | Cys | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |
|-----|-----|-----|
| Ala | Val | Xaa |
| 65  |     |     |

&lt;210&gt; 5330

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (51)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5330

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gln | Phe | Leu | Gly | His | Ala | Pro | Val | Cys | Ser | Asp | Met | Leu | Leu | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Thr | Glu | Met | Ala | Met | Ser | Thr | Gly | Gly | Lys | Ile | Thr | Pro | Thr | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Glu | Lys | Pro | Val | Arg | Gly | Ser | Thr | Ala | Gly | Ala | Ala | Leu | Ser |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Glu | Xaa | Ser | Cys | Leu | Pro | Asp | Ser | Met | Ala | Phe | Val | Ser | Ile | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |
|-----|
| Val |
| 65  |

## 4753

<210> 5331  
 <211> 63  
 <212> PRT  
 <213> Homo sapiens

<400> 5331  
 Ile Pro Ala Leu Leu Leu Thr Ser Leu Gly Pro Trp Arg Met Leu Ser  
           1                  5                  10                  15  
 Ile Ser Leu Ser Leu Ser Val Leu Leu Cys Lys Met Trp Met Ile Pro  
                   20                  25                  30  
 Asp Ser Gln Ala Phe Cys Gln Asp Tyr Met Gly Phe Leu His Ser Ala  
           35                  40                  45  
 Met Ser Ser Asp Asn Ile Asn Thr Lys Ser Asn Leu Leu Asn Val  
           50                  55                  60

<210> 5332  
 <211> 404  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (42)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (151)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (223)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5332  
 Met Pro Asp Gly Ala Thr Leu Ala Ile Gly Ser Ser Arg Gly Lys Ile  
           1                  5                  10                  15  
 Tyr Gln Tyr Asp Leu Arg Met Leu Lys Ser Pro Val Lys Thr Ile Ser  
                   20                  25                  30  
 Ala His Lys Thr Ser Val Gln Cys Ile Xaa Phe Gln Tyr Ser Thr Val

## 4754

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Leu Thr Lys Ser Ser Leu Asn Lys Gly Cys Ser Asn Lys Pro Thr Thr |     |     |
| 50  | 55  | 60  |
| Val Asn Lys Arg Met Phe Asn Val Asn Ala Ala Ser Gly Gly Val Gln |     |     |
| 65  | 70  | 75  |
| Asn Ser Gly Ile Val Arg Glu Ala Pro Ala Thr Ser Ile Ala Thr Val |     |     |
| 85  | 90  | 95  |
| Leu Pro Gln Pro Met Thr Ser Ala Met Gly Lys Gly Thr Val Ala Val |     |     |
| 100   | 105 | 110 |
| Gln Glu Lys Ala Gly Leu Pro Arg Ser Ile Asn Thr Asp Thr Leu Ser |     |     |
| 115   | 120 | 125 |
| Lys Glu Thr Asp Ser Gly Lys Asn Gln Asp Phe Ser Ser Phe Asp Asp |     |     |
| 130   | 135 | 140 |
| Thr Gly Lys Ser Ser Leu Xaa Asp Met Phe Ser Pro Ile Arg Asp Asp |     |     |
| 145   | 150 | 155 |
| Ala Val Val Asn Lys Gly Ser Asp Glu Ser Ile Gly Lys Gly Asp Gly |     |     |
| 165   | 170 | 175 |
| Phe Asp Phe Leu Pro Gln Leu Asn Ser Val Phe Pro Pro Arg Lys Asn |     |     |
| 180   | 185 | 190 |
| Pro Val Thr Ser Ser Thr Ser Val Leu His Ser Ser Pro Leu Asn Val |     |     |
| 195   | 200 | 205 |
| Phe Met Gly Ser Pro Gly Lys Glu Glu Asn Glu Asn Arg Asp Xaa Thr |     |     |
| 210   | 215 | 220 |
| Ala Glu Ser Lys Lys Ile Tyr Met Gly Lys Gln Glu Ser Lys Asp Ser |     |     |
| 225   | 230 | 235 |
| Phe Lys Gln Leu Ala Lys Leu Val Thr Ser Gly Ala Glu Ser Gly Asn |     |     |
| 245   | 250 | 255 |
| Leu Asn Thr Ser Pro Ser Ser Asn Gln Thr Arg Asn Ser Glu Lys Phe |     |     |
| 260   | 265 | 270 |
| Glu Lys Pro Glu Asn Glu Ile Glu Ala Gln Leu Ile Cys Glu Pro Pro |     |     |
| 275   | 280 | 285 |
| Ile Asn Gly Ser Ser Thr Pro Asn Pro Lys Ile Ala Ser Ser Val Thr |     |     |
| 290   | 295 | 300 |
| Ala Gly Val Ala Ser Ser Leu Ser Glu Lys Ile Ala Asp Ser Ile Gly |     |     |

## 4755

305                      310                      315                      320  
 Asn Asn Arg Gln Asn Ala Pro Leu Thr Ser Ile Gln Ile Arg Phe Ile  
                                  325                      330                      335  
 Gln Asn Met Ile Gln Glu Thr Leu Asp Asp Phe Arg Glu Ala Cys His  
                                  340                      345                      350  
 Arg Asp Ile Val Asn Leu Gln Val Glu Met Ile Lys Gln Phe His Met  
                                  355                      360                      365  
 Gln Leu Asn Glu Met His Ser Leu Leu Glu Arg Tyr Ser Val Asn Glu  
                                  370                      375                      380  
 Gly Leu Val Ala Glu Ile Glu Arg Leu Arg Glu Glu Asn Lys Arg Leu  
 385                                   390                      395                      400  
 Arg Ala His Phe

&lt;210&gt; 5333

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5333

Arg Lys Pro Gln Thr Pro Thr Ala Leu Cys Thr Xaa Trp Cys Pro His  
 1                      5                      10                      15

Phe Gln Lys Lys Lys Lys Lys Ile Ser Lys Ile Glu Phe Lys Lys Ser  
                                  20                      25                      30

His Leu Ser Cys Pro Ala Asn Ile Cys Ser Ser Leu Val Gly Ala Val  
                                  35                      40                      45

Glu Ala Ser Thr His Arg Gln Ala Val Ala Gly Thr Val Lys Gly Lys  
                                  50                      55                      60

Thr Pro  
 65

&lt;210&gt; 5334



## 4756

&lt;211&gt; 258

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (251)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5334

```

Pro Arg Val Arg Arg Glu Val Gln Ser Leu Lys Glu Gln His Gln Lys
 1             5             10             15

Glu Ile Ser Glu Leu Asn Glu Thr Phe Leu Ser Asp Ser Glu Lys Glu
          20             25             30

Lys Leu Thr Leu Met Phe Glu Ile Gln Gly Leu Lys Glu Gln Cys Glu
          35             40             45

Asn Leu Gln Gln Glu Lys Gln Glu Ala Ile Leu Asn Tyr Glu Ser Leu
          50             55             60

Arg Glu Ile Met Glu Ile Leu Gln Thr Glu Leu Gly Glu Ser Ala Gly
          65             70             75             80

Lys Ile Ser Gln Glu Phe Glu Ser Met Lys Gln Gln Gln Ala Ser Asp
          85             90             95

Val His Glu Leu Gln Gln Lys Leu Arg Thr Ala Phe Thr Glu Lys Asp
          100            105            110

Ala Leu Leu Glu Thr Val Asn Arg Leu Gln Gly Glu Asn Glu Lys Leu
          115            120            125

Leu Ser Gln Gln Glu Leu Val Pro Glu Leu Glu Asn Thr Ile Lys Asn
          130            135            140

Leu Gln Glu Lys Asn Gly Val Tyr Leu Leu Ser Leu Ser Gln Arg Asp
          145            150            155            160

Thr Met Leu Lys Glu Leu Glu Gly Lys Ile Asn Ser Leu Thr Glu Glu
          165            170            175

Lys Asp Asp Phe Ile Asn Lys Leu Lys Asn Ser His Glu Glu Met Asp
          180            185            190

Asn Phe His Lys Lys Cys Glu Arg Glu Glu Arg Leu Ile Leu Glu Leu
          195            200            205

Gly Lys Lys Val Glu Gln Thr Ile Gln Tyr Asn Ser Glu Leu Glu Gln
          210            215            220

```

## 4757

Lys Val Asn Glu Leu Thr Gly Gly Leu Glu Glu Thr Leu Lys Glu Lys  
 225 230 235 240

Asp Gln Asn Asp Gln Lys Leu Glu Lys Leu Xaa Gly Ser Asn Glu Ser  
 245 250 255

Ser Leu

<210> 5335

<211> 60

<212> PRT

<213> Homo sapiens

<400> 5335

Tyr Ala Ile Ile Met Gln Leu Asn Val Asp Glu Ser Gly Arg Gly Trp  
 1 5 10 15

Ala Gln Met Val Pro His Asp Pro Gly Ile Asp Pro Glu Phe Pro Glu  
 20 25 30

Glu Trp Val Asp Asn Thr Tyr Ser Asn Lys Asn Pro Phe Leu Leu Phe  
 35 40 45

Ser Ile Lys Leu Leu Ser Lys Ile Ile Asp Arg Leu  
 50 55 60

<210> 5336

<211> 124

<212> PRT

<213> Homo sapiens

<400> 5336

Leu Cys His Glu Lys Leu Ser Leu Leu Glu Asp Phe Lys Asp Phe Arg  
 1 5 10 15

Asp Ser Cys Ser Ser Ser Glu Arg Thr Asp Gly Arg Tyr Ser Lys Tyr  
 20 25 30

Arg Val Arg Arg Asn Ser Leu Gln His His Gln Asp Asp Thr Lys Tyr  
 35 40 45

Arg Thr Lys Ser Phe Lys Gly Asp Arg Thr Phe Leu Glu Gly Tyr His  
 50 55 60

Thr Arg Gly Leu Asp His Ser Ser Ser Trp Gln Asp His Ser Arg Phe

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|----|
| 65  |     |     |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     |  |  | 80 |
| Leu | Ser | Ser | Pro | Arg | Phe | Ser | Tyr | Val | Asn | Ser | Phe | Thr | Lys | Arg | Thr |  |  |    |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |  |  |    |
| Val | Ala | Pro | Asp | Ser | Ala | Ser | Asn | Lys | Glu | Asp | Ala | Thr | Met | Asn | Gly |  |  |    |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |  |  |    |
| Thr | Ser | Ser | Gln | Pro | Lys | Lys | Glu | Glu | Tyr | Gly | Ser |     |     |     |     |  |  |    |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     |     |     |     |     |  |  |    |

```
<220>
<221> SITE
<222> (110)
<223> Xaa equals any of the naturally occurring L-amino acids
```

<400> 5337  
Met Ser Arg Thr Arg Pro Ala Arg Pro Met Gly Trp Gly Gln Gln Arg  
1 5 10 15

Pro Glu Gly Ser Thr Arg Arg Thr Ile Glu Gly Gln Ser Pro Glu Pro  
35 40 45

Gly Ala Leu Glu Leu Asn Gln Arg Asp Ala Ala Ala Glu Thr Glu Leu  
65 70 75 80

Arg Val His Pro Pro Cys Gln Arg His Cys Pro Glu Pro Arg Val His  
85 90 95

## 4759

Pro Lys Lys Thr Lys Pro Pro Ala Lys Leu Pro Lys Val Xaa Thr Gln  
                   100                  105                  110

Lys Pro Pro Ser Leu Ala Leu Phe Pro Xaa Ser Ser Pro Cys Gly Asn  
                   115                  120                  125

Leu Leu Leu Ala Arg Lys Phe Gly  
           130                  135

&lt;210&gt; 5338

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5338

Val Leu Asp Arg Glu Arg Pro Ser Phe Phe Phe Phe Ser Val Gln  
   1                  5                  10                  15

Ala Gln Phe Cys His Gln Phe Asp Tyr Glu Lys Ser Phe Gly Leu Pro  
                   20                  25                  30

Gly Ser Phe Gly Ala Trp Lys Leu Gln Met Arg Asp Gly Gly Leu His  
           35                  40                  45

Cys Phe Ala Ala Gly Glu Arg Glu Leu Ile Arg Ser Leu Pro Thr Glu  
           50                  55                  60

Val Gly Val Met Pro Asp Ala Glu Arg Ser Gly Ser Pro Arg Ala Gln  
   65                  70                  75                  80

Ala Pro Cys Gly Arg Cys Pro Gln Arg Ala Ser Pro Pro Pro Arg Pro  
                   85                  90                  95

Gly Ser Tyr Leu Leu His Asp Leu Leu Pro Arg Arg Ala Ala Tyr Leu  
                   100                  105                  110

Leu Asp Gly Leu Leu Asp Val Leu  
           115                  120

&lt;210&gt; 5339

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

## 4760

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5339

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Met | Met | Tyr | Leu | Xaa | Asn | His | Thr | Pro | Val | Leu | Ile | Ser | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ile | Ser | Met | Phe | Thr | Phe | Ser | Val | Trp | Met | Ser | Gly | Arg | Thr | Leu |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asn | Trp | Gln | Ser | Cys | Pro | Thr | His | Ala | Glu | His | Leu |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |

&lt;210&gt; 5340

&lt;211&gt; 288

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5340

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Ala | Pro | Pro | Gly | Arg | Cys | Arg | Pro | Trp | Pro | Val | Pro | Ser | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Phe | Ser | Ala | Pro | Arg | Ala | Val | Pro | Ser | Gln | Ser | Pro | Ala | Pro | Arg |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Arg | Ala | Asp | Arg | Pro | Ser | Arg | Arg | Leu | Pro | Val | Pro | Gly | Thr | Pro |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Pro | Leu | Ala | Arg | Ser | Pro | Pro | Ala | Ala | His | Val | Pro | Gly | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Arg | Ala | Gly | Gly | Arg | Ala | Ala | Arg | Arg | Ser | Gln | Ala | Gly | Leu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ser | Val | Pro | Met | Ala | Ala | Ala | Gly | Trp | Arg | Asp | Gly | Ser | Gly | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Tyr | Arg | Leu | Val | Val | Val | Gly | Gly | Gly | Gly | Val | Gly | Lys | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Thr | Ile | Gln | Phe | Ile | Gln | Ser | Tyr | Phe | Val | Thr | Asp | Tyr | Asp |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Thr | Ile | Glu | Asp | Ser | Tyr | Thr | Lys | Gln | Cys | Val | Ile | Asp | Asp | Arg |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Arg | Leu | Asp | Ile | Leu | Asp | Thr | Ala | Gly | Gln | Glu | Glu | Phe | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

## 4761

Ala Met Arg Glu Gln Tyr Met Arg Thr Gly Glu Gly Phe Leu Leu Val  
165 170 175

Phe Ser Val Thr Asp Arg Gly Ser Phe Glu Glu Ile Tyr Lys Phe Gln  
180 185 190

Arg Gln Ile Leu Arg Val Lys Asp Arg Asp Glu Phe Pro Met Ile Leu  
195 200 205

Ile Gly Asn Lys Ala Asp Leu Asp His Gln Arg Gln Val Thr Gln Glu  
210 215 220

Glu Gly Gln Gln Leu Ala Arg Gln Leu Lys Val Thr Tyr Met Glu Ala  
225 230 235 240

Ser Ala Lys Ile Arg Met Asn Val Asp Gln Ala Phe His Glu Leu Val  
245 250 255

Arg Val Ile Arg Lys Phe Gln Glu Gln Glu Cys Pro Pro Ser Pro Glu  
260 265 270

Pro Thr Arg Lys Glu Lys Asp Lys Lys Gly Cys His Cys Val Ile Phe  
275 280 285

&lt;210&gt; 5341

&lt;211&gt; 279

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (88)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5341

Ala Ala Ala Glu Arg Asp Val Pro Pro Pro Pro Pro Pro Pro Pro  
1 5 10 15

Pro Ser Glu Pro Leu Leu Ala Leu Arg Gly Gly Ala Thr Asp Ala Cys  
20 25 30

Leu Ala Arg Arg Thr Leu Arg Asp Pro Gly Ala Ala Gln Pro Ala Glu  
35 40 45

Pro Arg Arg Ser Pro Ala Pro Gly Ala Pro Gly Ser Gln Cys Arg Pro  
50 55 60

## 4762

Ala Gly Gly Pro Val Arg Glu Pro Arg Val Arg Glu Leu Arg Leu His  
 65 70 75 80  
 Pro Asp Ala Ala Val Ala Arg Xaa Gly Thr Gly His Tyr Leu Cys Asn  
 85 90 95  
 Ala Cys Gly Leu Tyr Ser Lys Met Asn Gly Leu Ser Arg Pro Leu Ile  
 100 105 110  
 Lys Pro Gln Lys Arg Val Pro Ser Ser Arg Arg Leu Gly Leu Ser Cys  
 115 120 125  
 Ala Asn Cys His Thr Thr Thr Thr Thr Leu Trp Arg Arg Asn Ala Glu  
 130 135 140  
 Gly Glu Pro Val Cys Asn Ala Cys Gly Leu Tyr Met Lys Leu His Gly  
 145 150 155 160  
 Val Pro Arg Pro Leu Ala Met Lys Lys Glu Gly Ile Gln Thr Arg Lys  
 165 170 175  
 Arg Lys Pro Lys Asn Ile Asn Lys Ser Lys Thr Cys Ser Gly Asn Ser  
 180 185 190  
 Asn Asn Ser Ile Pro Met Thr Pro Thr Ser Thr Ser Ser Asn Ser Asp  
 195 200 205  
 Asp Cys Ser Lys Asn Thr Ser Pro Thr Thr Gln Pro Thr Ala Ser Gly  
 210 215 220  
 Ala Gly Ala Pro Val Met Thr Gly Ala Gly Glu Ser Thr Asn Pro Glu  
 225 230 235 240  
 Asn Ser Glu Leu Lys Tyr Ser Gly Gln Asp Gly Leu Tyr Ile Gly Val  
 245 250 255  
 Ser Leu Ala Ser Pro Ala Glu Val Thr Ser Ser Val Arg Pro Asp Ser  
 260 265 270  
 Trp Cys Ala Leu Ala Leu Ala  
 275

&lt;210&gt; 5342

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5342

## 4763

Glu Glu Leu Glu Ala Arg Gly Leu Arg Trp Leu Pro Trp Val Phe Pro  
 1 5 10 15  
 Ser Arg Leu Cys Tyr Cys Val Arg Pro Phe Ser His Cys Gly His Val  
 20 25 30  
 Phe Leu Glu Ser Ile Phe Gln Val Leu Tyr Ile Gln His Ser Pro Pro  
 35 40 45  
 Ser Phe Ser Leu Ile Pro Phe  
 50 55

&lt;210&gt; 5343

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (40)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5343

Thr Glu Glu Ile Leu Arg Thr Arg Gly Ser Thr Arg Glu Phe Arg Thr  
 1 5 10 15  
 Gly Thr Cys Arg Arg Thr Ser Phe Pro Ile Val Ser Arg Ile Arg Ala  
 20 25 30  
 Trp Arg Asn His Gly His Ser Xaa Phe Leu Cys Glu Ile Gly Ile Arg  
 35 40 45  
 Ser Gln Phe His Thr Thr Tyr Glu Pro Glu Ala  
 50 55

&lt;210&gt; 5344

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5344

Ser Met His Lys Ala Gly Leu Leu Gly Leu Cys Ala Arg Ala Trp Asn  
 1 5 10 15  
 Ser Val Arg Met Ala Ser Ser Gly Met Thr Arg Arg Asp Pro Leu Ala  
 20 25 30



## 4764

Asn Lys Val Ala Leu Val Thr Ala Ser Thr Asp Gly Ile Gly Phe Ala  
           35                          40                          45  
 Ile Ala Arg Arg Leu Ala Gln Asp Gly Ala His Val Val Val Ser Ser  
           50                          55                          60  
 Arg Lys Gln Gln Asn Val Asp Gln Ala Val Ala Thr Leu Gln Gly Glu  
           65                          70                          75                          80  
 Gly Leu Ser Val Thr Gly Thr Cys Ala Met Trp Gly Arg Arg Arg Thr  
                           85                          90                          95  
 Gly Ser Gly Trp Trp Pro Arg  
                           100

&lt;210&gt; 5345

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5345

Ser Leu Tyr Met Leu Thr Asn Ser Lys Gly Lys Glu Ile Asp His Lys  
           1                          5                          10                          15  
 Leu His Val Asn Val Glu Gly Lys Leu Ile Asp His Lys Leu Lys Tyr  
                           20                          25                          30  
 Asn Leu Ile Cys Tyr Ile Phe Leu Leu Ile Tyr Ile Pro Met Lys Xaa  
           35                          40                          45  
 Phe Leu Tyr  
           50

&lt;210&gt; 5346

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4765

&lt;400&gt; 5346

Cys Phe Ser Leu Pro Ser Leu Phe Thr Ala Val Lys Phe Ile Lys Cys  
 1 5 10 15  
 Phe Ser Val Xaa Phe Cys Ser Leu Ser Phe Thr Gly Tyr Phe Phe Met  
 20 25 30  
 Tyr Thr Phe Arg Ile Phe Cys Leu Leu Tyr Pro Val Val Gln Met Ile  
 35 40 45  
 Ser Tyr Ile Leu Gln Met Pro Phe Gln Phe Leu Phe Ser Phe Ser Ile  
 50 55 60  
 Lys Leu Pro Ser Cys Pro Asn Val Gln Phe Val Ser Val Cys Val Cys  
 65 70 75 80  
 Val Cys Val Cys Val Asn Leu Ile Phe Lys Ser Ala Arg Leu Pro Ile  
 85 90 95

&lt;210&gt; 5347

&lt;211&gt; 291

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5347

Arg Pro Asp Ser Arg Val Asp Pro Arg Val Arg Glu Val Thr Asp Tyr  
 1 5 10 15  
 Ala Ile Ala Arg Arg Ile Val Asp Leu His Ser Arg Ile Glu Glu Ser  
 20 25 30  
 Ile Asp Arg Val Tyr Ser Leu Asp Asp Ile Arg Arg Tyr Leu Leu Phe  
 35 40 45  
 Ala Arg Gln Phe Lys Pro Lys Ile Ser Lys Glu Ser Glu Asp Phe Ile  
 50 55 60  
 Val Glu Gln Tyr Lys His Leu Arg Gln Arg Asp Gly Ser Gly Val Thr  
 65 70 75 80  
 Lys Ser Ser Trp Arg Ile Thr Val Arg Gln Leu Glu Ser Met Ile Arg  
 85 90 95  
 Leu Ser Glu Ala Met Ala Arg Met His Cys Cys Asp Glu Val Gln Pro  
 100 105 110

## 4766

Lys His Val Lys Glu Ala Phe Arg Leu Leu Asn Lys Ser Ile Ile Arg  
 115 120 125  
 Val Glu Thr Pro Asp Val Asn Leu Asp Gln Glu Glu Glu Ile Gln Met  
 130 135 140  
 Glu Val Asp Glu Gly Ala Gly Gly Ile Asn Gly His Ala Asp Ser Pro  
 145 150 155 160  
 Ala Pro Val Asn Gly Ile Asn Gly Tyr Asn Glu Asp Ile Asn Gln Glu  
 165 170 175  
 Ser Ala Pro Lys Ala Ser Leu Arg Leu Gly Phe Ser Glu Tyr Cys Arg  
 180 185 190  
 Ile Ser Asn Leu Ile Val Leu His Leu Arg Lys Val Glu Glu Glu Glu  
 195 200 205  
 Asp Glu Ser Ala Leu Lys Arg Ser Glu Leu Val Asn Trp Tyr Leu Lys  
 210 215 220  
 Glu Ile Glu Ser Glu Ile Asp Ser Glu Glu Glu Leu Ile Asn Lys Lys  
 225 230 235 240  
 Arg Ile Ile Glu Lys Val Ile His Arg Leu Thr His Tyr Asp His Val  
 245 250 255  
 Leu Ile Glu Leu Thr Gln Ala Gly Leu Lys Gly Ser Thr Glu Gly Ser  
 260 265 270  
 Glu Ser Tyr Glu Glu Asp Pro Tyr Leu Val Val Asn Pro Asn Tyr Leu  
 275 280 285  
 Leu Glu Asp  
 290

&lt;210&gt; 5348

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5348

Thr Cys Ser Arg Ser Arg Ala Ala Ala Leu Leu Thr Val Leu Gly Val  
 1 5 10 15  
 Cys Val Gln Ser Glu Gln Gly Leu Cys Phe Trp Ile Val Lys Glu Asp  
 20 25 30

4767

Ala

&lt;210&gt; 5349

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5349

Thr Pro Ala Gly Xaa Arg Ser Gly Asn Ser Arg Val Glu Gly Pro Leu

1

5

10

15

Ser Cys Leu Tyr Ser Phe Ser Leu Leu Tyr Ser Phe Thr Arg Ser Pro

20

25

30

His Leu Thr Ser Glu Leu Leu Gly Pro Leu Asp Pro His Ile Ser Trp

35

40

45

Ala Ile Ser Leu Phe Cys

50

&lt;210&gt; 5350

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5350

## 4768

Xaa Arg Lys Thr Leu Asp Val Xaa Xaa Thr Ile Met Gly Thr Arg Ile  
 1 5 10 15  
 Glu Gly Phe Phe Pro Leu Lys Ala Phe Leu Pro Gly Gly Trp Ala Leu  
 20 25 30  
 Leu Gly His Ala Leu Gln Ser Ser Val Pro Gln Gln Glu Ser Gly Gly  
 35 40 45  
 His His Leu Pro Ala Ser Ser Thr Phe Ser Ala Ser Leu Phe Ser Met  
 50 55 60  
 Asn Pro Gly Arg Pro Ala Gly Thr Ser Lys Phe Pro Gly Leu Ser Ala  
 65 70 75 80

<210> 5351  
 <211> 53  
 <212> PRT  
 <213> Homo sapiens

<400> 5351  
 Gln Thr Leu Arg Thr Lys Met Asn Glu Asn Leu Phe Ala Ser Phe Ile  
 1 5 10 15  
 Ala Pro Thr Ile Leu Gly Leu Pro Ala Ala Val Leu Ile Ile Leu Phe  
 20 25 30  
 Pro Pro Leu Leu Ile Pro Thr Ser Lys Tyr Leu Ile Asn Asn Arg Leu  
 35 40 45  
 Ile Thr Thr Gln Gln  
 50

<210> 5352  
 <211> 185  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (113)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5352

## 4769

Arg Cys Pro Thr Arg Ser Pro Pro Pro Asp Thr Pro Gly Ser Arg Gly  
 1 5 10 15  
 Thr Thr Ala Met Cys Ser Leu Ala Ser Gly Ala Thr Gly Gly Arg Gly  
 20 25 30  
 Ala Val Glu Asn Glu Glu Asp Leu Pro Glu Leu Ser Asp Ser Gly Asp  
 35 40 45  
 Glu Ala Ala Trp Glu Asp Glu Asp Asp Ala Asp Leu Pro His Gly Lys  
 50 55 60  
 Gln Gln Thr Pro Cys Leu Phe Cys Asn Arg Leu Phe Thr Ser Ala Glu  
 65 70 75 80  
 Glu Thr Phe Ser His Cys Lys Ser Glu His Gln Phe Asn Ile Asp Ser  
 85 90 95  
 Met Val His Lys His Gly Leu Glu Phe Tyr Gly Tyr Ile Lys Leu Ile  
 100 105 110  
 Xaa Phe Ile Arg Leu Lys Asn Pro Thr Val Glu Tyr Met Asn Ser Ile  
 115 120 125  
 Tyr Asn Pro Val Pro Trp Glu Lys Glu Glu Tyr Leu Lys Pro Val Leu  
 130 135 140  
 Glu Asp Asp Leu Leu Leu Gln Phe Asp Val Glu Asp Leu Tyr Glu Pro  
 145 150 155 160  
 Val Ser Val Pro Phe Ser Tyr Pro Asn Gly Leu Ser Glu Asn Thr Ser  
 165 170 175  
 Val Val Glu Lys Leu Lys His Met Glu  
 180 185

&lt;210&gt; 5353

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5353

Tyr Ile Lys Ala Leu Leu Ser Ser Asp Tyr Ala Tyr Phe Ala Ser Arg  
 1 5 10 15  
 Glu Thr Glu Ala Trp Val Gly Gln Arg Gly Ala His Val Phe Thr Ala  
 20 25 30  
 Leu Ser Ala Pro Asp Phe Gly Ala Ile Ser Leu His Pro Cys Ala Pro

## 4770

35                                      40                                      45  
 Val Lys Asn Leu Ala Ser Thr Phe Cys Ser Pro Asp Pro Pro Ser Leu  
     50                                      55                                      60  
 Thr Cys Gly Ser Cys His Thr Lys Met Gly Leu Pro  
     65                                      70                                      75

<210> 5354  
 <211> 62  
 <212> PRT  
 <213> Homo sapiens

<400> 5354  
 Gly Thr Gln Leu Ile Thr Arg Arg Ile Asn Trp Pro Lys Phe Leu Ile  
     1                                      5                                      10                                      15  
 Phe Gln Phe Val Ala Pro Ala Pro Arg Asp His Gln Lys Leu Phe Trp  
                                     20                                      25                                      30  
 Val Ser Leu Ser Leu Arg Arg Asp Pro Leu His Arg Pro Ser Leu Ile  
                                     35                                      40                                      45  
 Leu Ile Ser Pro Cys Pro Glu Ser Val Asn Val Pro Arg Lys  
                                     50                                      55                                      60

<210> 5355  
 <211> 80  
 <212> PRT  
 <213> Homo sapiens

<400> 5355  
 Gly His Val Asp Asn Leu Arg Tyr His Ser Ile Val His Asn Val His  
     1                                      5                                      10                                      15  
 His Tyr Ser Val Asp Cys Lys Gly Leu Leu Ser Ser Cys Lys Asn Tyr  
                                     20                                      25                                      30  
 Pro Ser Lys Ser Ile Phe Lys Val Leu Val Leu Leu Ile Tyr Lys Leu  
                                     35                                      40                                      45  
 Cys Ala Arg Ser Pro Lys Val Asn Ser Asn Ile Tyr Leu Lys Tyr Ser  
                                     50                                      55                                      60  
 Leu Ser Tyr Leu Ile Asn Leu Trp Tyr Ile Phe Leu Tyr Tyr Ala Cys  
     65                                      70                                      75                                      80

## 4771

&lt;210&gt; 5356

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5356

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Leu Lys Met Lys Thr Pro Phe Phe Ile Phe Asn Leu Ala Glu Thr Ala
 1             5             10             15

His Met Pro Ser Lys Val Lys Ala Gln Leu Tyr Ala Gln Ala Tyr Asp
          20             25             30

Leu Tyr Lys Glu Ile Val Tyr Leu Gln Lys Glu His Pro Val Asn Trp
          35             40             45

His Lys Asn Tyr Ala Ile Ala Cys Glu Arg Met Leu Arg Leu Gln Ala
          50             55             60

Arg Asp Ala Asp Pro Glu Val Leu Leu Ser Glu Thr Ile Arg His Phe
          65             70             75             80

Arg Leu Tyr Ser Gln Lys Ala Pro Asn Asp Pro Gln Gln Ala Asp Ile
          85             90             95

Leu Gly Ala Leu Lys His Leu Arg Lys Glu Leu Gln Ser Leu Arg Asn
          100             105             110

Arg Lys Asn Val
          115

```

&lt;210&gt; 5357

&lt;211&gt; 184

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (110)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5357

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Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Glu Pro Ala Gly His
 1             5             10             15

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## 4772

Ser Gln Lys Lys Gly Lys Ala Ile Asn Ile Gly Gln Leu Val Asp Val  
                   20                  25                  30  
 Lys Val Leu Glu Lys Thr Lys Asp Gly Leu Glu Val Ala Val Leu Pro  
           35                  40                  45  
 His Asn Ile Arg Ala Phe Leu Pro Thr Ser His Leu Ser Asp His Val  
           50                  55                  60  
 Ala Asn Gly Pro Leu Leu His His Trp Leu Gln Ala Gly Asp Ile Leu  
           65                  70                  75                  80  
 His Arg Val Leu Cys Leu Ser Gln Ser Glu Gly Arg Val Leu Leu Cys  
                   85                  90                  95  
 Arg Lys Pro Ala Leu Val Ser Thr Val Glu Gly Gly Gln Xaa Pro Lys  
                   100                  105                  110  
 Asn Phe Ser Glu Ile His Pro Gly Met Leu Leu Ile Gly Phe Val Lys  
           115                  120                  125  
 Ser Ile Lys Asp Tyr Gly Val Phe Ile Gln Phe Pro Ser Gly Leu Ser  
           130                  135                  140  
 Gly Leu Ala Pro Lys Ala Ile Met Ser Asp Lys Phe Val Thr Ser Thr  
           145                  150                  155                  160  
 Ser Asp His Phe Val Glu Gly Gln Thr Val Ala Ala Lys Val Thr Asn  
                   165                  170                  175  
 Val Asp Glu Glu Lys Gln Arg Met  
                   180

&lt;210&gt; 5358

&lt;211&gt; 77

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5358

Asn Leu Arg Phe Asp Asp Ala Glu Ala Leu Asp Tyr Thr Phe Ala Tyr  
           1                  5                  10                  15  
 Phe Asp Lys Val His Leu Ser Leu Phe Ile Ser Ser Val Phe Phe Cys  
                   20                  25                  30  
 Tyr Gln Arg Gln Leu Ile Ser Phe Val Pro Gln Tyr Phe Phe Cys Lys  
           35                  40                  45  
 Tyr Leu Pro Lys Phe Phe Gln Ile Leu Cys Lys Met Gln Val Ile Val

## 4773

50                                      55                                      60  
 Glu Met Pro Val Tyr Ala Phe Met Leu Ala Ser Leu Asn  
 65                                      70                                      75  
  
 <210> 5359  
 <211> 83  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5359  
 Gln Ser Val Tyr Lys Arg Gly Leu Gln Lys Lys Met Arg Ala Cys Phe  
 1                                      5                                      10                                      15  
 Thr Gln Gln Lys Ile Trp Pro Phe Leu Asn Asp Thr Arg Arg Val Ile  
                                     20                                      25                                      30  
 Leu Ser His Thr Phe Pro Ser Phe Arg Trp Trp Thr Phe Val Glu Thr  
                                     35                                      40                                      45  
 Gly Thr Gln Trp Ser Asn Arg Leu Cys Pro Pro Val Ala Asp Ser Pro  
                                     50                                      55                                      60  
 Ala Gly Arg Trp Thr Arg Gly Pro Val Leu Thr Val Thr Arg Leu Ser  
 65                                      70                                      75                                      80  
 Leu Leu Glu

<210> 5360  
 <211> 82  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5360  
 Phe Tyr Pro Gly Arg Lys Ile Lys Gly Ser His Arg Ile Ala Leu Val  
 1                                      5                                      10                                      15  
 Lys Thr Lys His Thr Ile Ala Leu Thr Glu Tyr Leu Gly Asn Leu Pro  
                                     20                                      25                                      30  
 Asn Leu Leu Ile Phe Gly Val Cys Phe Leu Thr Val Gly Leu Trp Glu  
                                     35                                      40                                      45  
 Asp Val Ile Tyr Asp Gln Tyr Leu Pro Val Thr Leu Phe Ile Ser Leu  
 50                                      55                                      60

## 4774

Ala Leu Lys Ala Asn Gly Gly Lys Lys Ser Met Lys Lys Lys Arg Leu  
 65 70 75 80

Ile Lys

<210> 5361

<211> 100

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (15)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (70)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (98)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (100)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5361

Gly Lys Met Cys Ala Ala Gln Val Arg Glu Tyr Tyr Leu Ala Xaa Lys  
 1 5 10 15

Lys Lys Lys Gly Gly Arg Ser Arg Gly Ser Lys Leu Thr Tyr Ala Cys  
 20 25 30

Met Arg Arg His Ser Ser Ser Ile Val Ser Pro Lys Phe Asn Ser Leu  
 35 40 45

Ala Val Val Leu Gln Arg Arg Asp Trp Glu Asn Pro Gly Val Thr Gln  
 50 55 60

Leu Asn Arg Leu Ala Xaa His Pro Pro Phe Ala Ser Trp Arg Asn Ser  
 65 70 75 80

Glu Glu Ala Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg Lys Pro Glu  
 85 90 95

## 4775

Trp Xaa Met Xaa  
100

<210> 5362

<211> 379

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (10)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5362

Arg Pro Thr Arg Pro Val Phe Tyr Ala Xaa Glu Ser Trp Ile Lys Tyr  
1 5 10 15

Asp Val Gln Glu Arg Gln Lys Tyr Leu Ala Gln Leu Leu Asn Ser Val  
20 25 30

Arg Leu Pro Leu Leu Ser Val Lys Phe Leu Thr Arg Leu Tyr Glu Ala  
35 40 45

Asn His Leu Ile Arg Asp Asp Arg Thr Cys Lys His Leu Leu Asn Glu  
50 55 60

Ala Leu Lys Tyr His Phe Met Pro Glu His Arg Leu Ser His Gln Thr  
65 70 75 80

Val Leu Met Thr Arg Pro Arg Cys Ala Pro Lys Val Leu Cys Ala Val  
85 90 95

Gly Gly Lys Ser Gly Leu Phe Ala Cys Leu Asp Ser Val Glu Met Tyr  
100 105 110

Phe Pro Gln Asn Asp Ser Trp Ile Gly Leu Ala Pro Leu Asn Ile Pro  
115 120 125

Arg Tyr Glu Phe Gly Ile Cys Val Leu Asp Gln Lys Val Tyr Val Ile  
130 135 140

Gly Gly Ile Ala Thr Asn Val Arg Pro Gly Val Thr Ile Arg Lys His  
145 150 155 160

Glu Asn Ser Val Glu Cys Trp Asn Pro Asp Thr Asn Thr Trp Thr Ser  
165 170 175

Leu Glu Arg Met Asn Glu Ser Arg Ser Thr Leu Gly Val Val Val Leu

## 4776

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| 180 |     |     |     |     |     | 185 |     |     |     |     |     | 190 |     |     |     |  |  |
| Ala | Gly | Glu | Leu | Tyr | Ala | Leu | Gly | Gly | Tyr | Asp | Gly | Gln | Ser | Tyr | Leu |  |  |
| 195 |     |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |  |  |
| Gln | Ser | Val | Glu | Lys | Tyr | Ile | Pro | Lys | Ile | Arg | Lys | Trp | Gln | Pro | Val |  |  |
| 210 |     |     |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |  |  |
| Ala | Pro | Met | Thr | Thr | Thr | Arg | Ser | Cys | Phe | Ala | Ala | Ala | Val | Leu | Asp |  |  |
| 225 |     |     |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     |  |  |
| Gly | Met | Ile | Tyr | Ala | Ile | Gly | Gly | Tyr | Gly | Pro | Ala | His | Met | Asn | Ser |  |  |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     |     |     |  |  |
| Val | Glu | Arg | Tyr | Asp | Pro | Ser | Lys | Asp | Ser | Trp | Glu | Met | Val | Ala | Ser |  |  |
|     |     |     | 260 |     |     |     |     |     | 265 |     |     |     |     |     |     |  |  |
| Met | Ala | Asp | Lys | Arg | Ile | His | Phe | Gly | Val | Gly | Val | Met | Leu | Gly | Phe |  |  |
| 275 |     |     |     |     |     | 280 |     |     |     |     |     | 285 |     |     |     |  |  |
| Ile | Phe | Val | Val | Gly | Gly | His | Asn | Gly | Val | Ser | His | Leu | Ser | Ser | Ile |  |  |
| 290 |     |     |     |     |     | 295 |     |     |     |     |     | 300 |     |     |     |  |  |
| Glu | Arg | Tyr | Asp | Pro | His | Gln | Asn | Gln | Trp | Thr | Val | Cys | Arg | Pro | Met |  |  |
| 305 |     |     |     |     |     | 310 |     |     |     |     |     | 315 |     |     |     |  |  |
| Lys | Glu | Pro | Arg | Thr | Gly | Val | Gly | Ala | Ala | Val | Ile | Asp | Asn | Tyr | Leu |  |  |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     |     |     |  |  |
| Tyr | Val | Val | Gly | Gly | His | Ser | Gly | Ser | Ser | Tyr | Leu | Asn | Thr | Val | Gln |  |  |
|     |     |     | 340 |     |     |     |     |     | 345 |     |     |     |     |     |     |  |  |
| Lys | Tyr | Asp | Pro | Ile | Ser | Asp | Thr | Trp | Leu | Asp | Ser | Ala | Gly | Met | Ile |  |  |
| 355 |     |     |     |     |     | 360 |     |     |     |     |     | 365 |     |     |     |  |  |
| Tyr | Cys | Arg | Cys | Asn | Phe | Gly | Leu | Thr | Ala | Leu |     |     |     |     |     |  |  |
| 370 |     |     |     |     |     | 375 |     |     |     |     |     |     |     |     |     |  |  |

<210> 5363

<211> 130

<212> PRT

<213> Homo sapiens

<400> 5363

Lys His Trp Thr Ser Leu Thr Tyr Phe Phe Ser Phe Ser Ala Phe Arg  
1 5 10 15

Met Ile Pro Tyr Pro Leu Glu Lys Gly His Leu Phe Tyr Pro Tyr Pro  
20 25 30

## 4777

Ile Cys Thr Glu Thr Ala Asp Arg Glu Leu Leu Pro Ser Phe His Glu  
 35 40 45

Val Ser Val Tyr Pro Lys Lys Glu Leu Pro Phe Phe Ile Leu Phe Thr  
 50 55 60

Ala Gly Leu Cys Ser Phe Thr Ala Met Leu Ala Leu Leu Thr His Gln  
 65 70 75 80

Phe Pro Glu Leu Met Gly Val Phe Ala Lys Ala Met Ile Asp Ile Phe  
 85 90 95

Cys Ser Ala Glu Phe Arg Asp Trp Asn Cys Lys Ser Ile Phe Met Arg  
 100 105 110

Val Glu Asp Glu Leu Glu Ile Pro Pro Ala Pro Gln Ser Gln His Phe  
 115 120 125

Gln Asn  
 130

<210> 5364

<211> 72

<212> PRT

<213> Homo sapiens

<400> 5364

Ser Ser Ala Leu Glu Val Leu Glu Phe Leu Ile Ser Phe Ile Gln Phe  
 1 5 10 15

Gln Gly Leu Ile Phe Tyr Arg Leu Pro Arg Gln Phe Ile Gln Gly Leu  
 20 25 30

Leu Tyr Leu Arg Phe Thr Cys His Val Arg Ser Ser Gly Phe Glu His  
 35 40 45

Lys Leu Tyr Ser Trp Asp Leu Ser Asp Thr Pro Leu Leu Thr Gly Leu  
 50 55 60

Gly Phe His Phe Ser Asp Pro Phe  
 65 70

<210> 5365

<211> 62

<212> PRT

<213> Homo sapiens

4778

&lt;400&gt; 5365

```

Ser Ala Pro Ser Pro Asn Leu Leu Pro Leu Gly Arg Val Gly Leu Arg
 1              5              10              15

Asp Leu Leu Ser Trp Lys Val Leu Thr Leu Pro Gly Glu Gly Ala Arg
          20              25              30

His Cys Pro Arg Glu Ser Asn Arg Arg Trp Lys Lys Ser Ile Lys Ser
          35              40              45

Asp Gln Asp Gly Gly Lys Lys Lys Lys Lys Lys Arg Gly Gly
          50              55              60

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&lt;210&gt; 5366

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5366

```

Gln Leu Val Thr Val Glu Glu Ala Gly Trp Val Phe Ser Gly Pro Arg
 1              5              10              15

Lys Phe Lys Met Ser Ala Met Leu Ser Ile Ile Thr Phe Cys Cys Gln
          20              25              30

Lys Gly Trp Gln Ile Glu Ala Phe Leu Pro Ile Ala Phe Ser Glu Leu
          35              40              45

Pro Cys Gln Ser Phe Thr Leu Gly Lys Glu Arg Trp Ala Gly Ile Leu
          50              55              60

Gly Asn Arg Thr Pro Glu Thr Tyr Leu Cys Leu Pro Lys Asn Val Asp
 65              70              75              80

```

&lt;210&gt; 5367

&lt;211&gt; 360

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4779

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (360)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5367

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Gln | Ala | Gln | Gly | Asp | Gln | Phe | Pro | Trp | Glu | Gln | Ala | Glu | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ala | Pro | Gly | Glu | Asp | Gly | Gln | Arg | Leu | Pro | Asp | Gln | Ile | His | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Pro | Ala | Arg | Arg | Arg | Pro | Trp | Trp | Arg | Glu | Arg | Ala | Arg | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Arg | Gly | Leu | Xaa | Glu | Gly | Arg | Glu | Pro | Glu | Lys | Arg | Arg | Glu | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gln | Arg | Arg | Glu | Gly | Gly | Asp | Gly | Glu | Glu | Gln | Asp | Val | Gly | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Arg | Leu | Leu | Leu | Arg | Val | Leu | His | Val | Ser | Glu | Asn | Pro | Val |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Thr | Val | Arg | Val | Ser | Pro | Glu | Val | Arg | Asp | Val | Arg | Pro | Tyr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Val | Gly | Ala | Val | Val | Arg | Gly | Met | Asp | Leu | Gln | Pro | Gly | Asn | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Arg | Phe | Leu | Thr | Ser | Gln | Thr | Lys | Leu | His | Glu | Asp | Leu | Cys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Arg | Thr | Ala | Ala | Thr | Leu | Ala | Thr | His | Glu | Leu | Arg | Ala | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gly | Pro | Leu | Leu | Tyr | Cys | Ala | Arg | Pro | Pro | Gln | Asp | Leu | Lys | Ile |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Leu | Gly | Arg | Lys | Glu | Ala | Lys | Ala | Lys | Glu | Leu | Val | Arg | Gln |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Leu | Glu | Ala | Glu | Glu | Gln | Arg | Lys | Gln | Lys | Lys | Arg | Gln | Ser |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Gly | Leu | His | Arg | Tyr | Leu | His | Leu | Leu | Asp | Gly | Asn | Glu | Asn |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Pro | Cys | Leu | Val | Asp | Ala | Asp | Gly | Asp | Val | Ile | Ser | Phe | Pro | Pro |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |



## 4780

Ile Thr Asn Ser Glu Lys Thr Lys Val Lys Lys Thr Thr Ser Asp Leu  
245 250 255

Phe Leu Glu Val Thr Ser Ala Thr Ser Leu Gln Ile Cys Lys Asp Val  
260 265 270

Met Asp Ala Leu Ile Leu Lys Met Ala Glu Met Lys Lys Tyr Thr Leu  
275 280 285

Glu Asn Lys Glu Glu Gly Ser Leu Ser Asp Thr Glu Ala Asp Ala Val  
290 295 300

Ser Gly Gln Leu Pro Asp Pro Thr Thr Asn Pro Ser Ala Gly Lys Asp  
305 310 315 320

Gly Pro Ser Leu Leu Val Val Glu Gln Val Arg Val Val Asp Leu Glu  
325 330 335

Gly Ser Leu Lys Val Val Tyr Pro Ser Lys Ala Asp Leu Ala Thr Ala  
340 345 350

Pro Pro His Val Thr Val Val Xaa  
355 360

<210> 5368

<211> 43

<212> PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

 $\langle 222 \rangle$  (3)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

&lt;221&gt; SITE

<222> (19)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

&lt;221&gt; SITE

$\langle 222 \rangle$  (20)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5368

Ala Arg Xaa Pro Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr  
1 5 10 15

**4781**

Ala Val Xaa Xaa Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn  
                   20                  25                  30

Ser Ala Arg Asp Phe Glu His Ser Ser Asp Ile  
           35                  40

<210> 5369

<211> 78

<212> PRT

<213> Homo sapiens

<400> 5369

Leu Gln Thr Lys Pro Ser Pro Ala Phe Phe Leu Leu Leu Leu Val Leu  
   1                  5                  10                  15

Gln Leu Gln Gly Pro Phe Thr Phe Met Ser Glu Met Glu Leu Trp Leu  
                   20                  25                  30

Phe Gln Trp Lys Asn Met Leu Lys Val Ser Phe Cys Ser Arg Lys Lys  
           35                  40                  45

Lys Ser Leu Pro Lys Trp Gly Lys Lys Leu Tyr Ile Tyr Leu Ile Ile  
           50                  55                  60

Gln Asn Thr Asp Gln Ser Leu Asp Leu Lys Lys Lys Lys Lys  
   65                  70                  75

<210> 5370

<211> 47

<212> PRT

<213> Homo sapiens

<400> 5370

Gly Ile Thr Ile Arg Lys Thr Val Cys Thr Cys Ser Leu Gln Met Gln  
   1                  5                  10                  15

Pro Leu Leu Ser Leu Thr Thr Ser Phe Tyr Leu Gln Leu Ile Glu Ser  
           20                  25                  30

Met Asp Val Glu Pro Val His Met Glu Gly Gln Leu Tyr Tyr Lys  
           35                  40                  45

<210> 5371

<211> 61

<212> PRT

## 4782

<213> Homo sapiens

<400> 5371

Thr Val Leu Ser Leu Ala Gly Leu Leu Gly Gly Lys Tyr Leu Gln Asn  
1 5 10 15  
Asn Gly Ile Val Leu Gly Phe Leu Leu Ala Leu Glu Thr His Leu Phe  
20 25 30  
Thr Asn Arg Phe Pro Glu Asp Thr Leu Ile Ser Pro Ser Tyr Leu Pro  
35 40 45  
Glu Cys Leu Leu Met Ala Ser Leu Lys Lys Gly Gly Leu  
50 55 60

<210> 5372

<211> 56

<212> PRT

<213> Homo sapiens

<400> 5372

Ser Ser Cys Pro Lys Ala Leu Trp Gly Pro Gly Trp Arg Ser Gln Gly  
1 5 10 15  
Ile Leu Tyr Asp Leu Ala Ile Gly Cys Lys Arg Lys His Ile Pro Cys  
20 25 30  
Cys Gly Ser Cys Ile Leu Phe His Ser Ser Pro Leu Lys Glu Lys Val  
35 40 45  
His Val Leu Ser Pro Ala His Pro  
50 55

<210> 5373

<211> 238

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (16)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (107)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4783

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (113)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5373

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Leu | Ile | Leu | Leu | Leu | Ser | Leu | Pro | Gly | Ile | Asp | Ile | Asn | Xaa |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asp | Asn | Ala | Gly | Trp | Thr | Pro | Leu | His | Glu | Ala | Cys | Asn | Tyr | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Thr | Val | Cys | Val | Gln | Glu | Ile | Leu | Gln | Arg | Cys | Pro | Glu | Val | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Thr | Gln | Val | Asp | Gly | Val | Thr | Pro | Leu | His | Asp | Ala | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Gly | His | Val | Glu | Ile | Gly | Lys | Leu | Leu | Leu | Gln | His | Gly | Gly | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Leu | Gln | Gln | Arg | Asn | Ala | Lys | Gly | Glu | Leu | Pro | Leu | Asp | Tyr |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Val | Ser | Pro | Gln | Ile | Lys | Glu | Glu | Leu | Xaa | Ala | Ile | Thr | Lys | Ile |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asp | Thr | Val | Glu | Asn | Phe | His | Ala | Gln | Ala | Glu | Lys | His | Phe | His |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Gln | Gln | Leu | Glu | Phe | Gly | Ser | Phe | Leu | Leu | Ser | Arg | Met | Leu | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Phe | Cys | Ser | Ile | Phe | Asp | Leu | Ser | Ser | Glu | Phe | Ile | Leu | Ala | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gly | Leu | Thr | His | Leu | Asn | Glu | Leu | Leu | Met | Ala | Cys | Lys | Ser | His |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Thr | Thr | Ser | Val | His | Thr | Asp | Trp | Leu | Leu | Asp | Leu | Tyr | Ala |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Asn | Ile | Lys | Thr | Leu | Gln | Lys | Leu | Pro | His | Ile | Leu | Lys | Glu | Leu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Asn | Leu | Lys | Val | Cys | Pro | Gly | Val | His | Thr | Glu | Ala | Leu | Met |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Ile | Thr | Leu | Glu | Met | Met | Cys | Arg | Ser | Val | Met | Glu | Phe | Ser |  |  |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |  |  |

4784

&lt;210&gt; 5374

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5374

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Lys | Asp | Cys | Leu | Lys | Thr | Lys | Gly | Asn | Leu | Thr | Asp | Glu | Lys | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asp | Glu | Arg | His | Leu | Thr | Lys | Asn | Glu | Lys | Lys | Leu | Ser | Gly | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Asn | Tyr | Glu | Lys | Met | Asn | Leu | Gln | Ile | Arg | Lys | Arg | Glu | Lys | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Asp | Thr | Met | Gly | Thr | Gln | Lys | Arg | Val | Asn | Thr | Asn | Val | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Arg | Val | Lys | Lys | Ser | Ile | Ile | Thr | Thr | Phe | Arg | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |

&lt;210&gt; 5375

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (54)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5375

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gly | Arg | Ala | Val | Thr | Gln | Ala | Gly | Val | Leu | Trp | His | Asn | Leu | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Gln | Pro | Gln | Phe | Leu | Gly | Leu | Asn | Ser | Pro | Pro | Thr | Ser | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Trp | Val | Ala | Gly | Thr | Thr | Val | Thr | Ala | Leu | Pro | Cys | Pro | Asp | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Phe | Phe | Xaa |
|     |     |     |     |     | 50  |

## 4785

&lt;210&gt; 5376

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5376

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Phe | Thr | Val | Leu | Phe | Gly | Ile | Ile | Leu | Tyr | Glu | Ala | Val | Trp | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Leu | Phe | Pro | Leu | Val | Asn | Trp | Leu | Met | Leu | Arg | Phe | Trp | Leu |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Ser | Ile | Cys | Val | Phe | Pro | Val | Leu | Ala | Ser | His | Tyr | Val | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Cys | Xaa | Ile | Phe |
|     |     | 50  |     |

&lt;210&gt; 5377

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5377

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Leu | Lys | Ser | Val | Cys | Val | Cys | Xaa | Arg | Ala | Arg | Met | Trp | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asn | Ser | Ala | Ile | Met | Ser | Asn | Ser | Ser | Phe | Ala | Leu | Phe | Leu | Arg |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asp | Asp | Ile | Arg | His | Phe | Ser | Val | Phe | Gly | Glu | Ile | Asp | Trp | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Pro | Lys | Pro | Thr | Gln | Val | Cys | Asn | Trp | Lys | Pro | Gly | Gly | Trp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Gly | Pro | Leu | Cys | Pro | Leu | Ser | Phe | Thr | Val | Ile | Leu | Phe | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

## 4786

Ser Thr

&lt;210&gt; 5378

&lt;211&gt; 290

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5378

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Asn | Ser | Xaa | Phe | Asp | Lys | Gln | Asn | Asp | Asp | Pro | Lys | Glu | Arg | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Asp | Thr | Lys | Asn | Val | Asn | Ser | Asn | Thr | Gly | Met | Gln | Thr | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asn | Tyr | Leu | Thr | Glu | Lys | Gly | Asn | Glu | Arg | Asn | Val | Lys | Phe | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | His | Pro | Val | Glu | Asn | Asp | Val | Thr | Gln | Thr | Val | Ser | Ser | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Pro | Ala | Ser | Ser | Arg | Ser | Lys | Lys | Leu | Cys | Asp | Val | Thr | Thr |
| 65  |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Lys | Ile | His | Val | Ser | Ile | Pro | Asn | Arg | Ile | Pro | Lys | Ile | Val |
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Gly | Glu | Asp | Asp | Tyr | Tyr | Thr | Asp | Gly | Glu | Glu | Ser | Ser | Asp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gly | Lys | Lys | Tyr | His | Val | Lys | Ser | Lys | Ser | Ala | Lys | Pro | Ser | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Val | Lys | Lys | Ser | Ile | Arg | Lys | Lys | Tyr | Cys | Lys | Val | Ser | Ser | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Ser | Ser | Leu | Ser | Ser | Ser | Ser | Ser | Gly | Ser | Gly | Thr | Asp | Cys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Ala | Gly | Ser | Asp | Ser | His | Leu | Ser | Asp | Ser | Ser | Pro | Ser | Ser |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ser | Ser | Lys | Lys | His | Val | Ser | Gly | Ile | Thr | Leu | Leu | Ser | Pro | Lys |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

## 4787

His Lys Tyr Lys Ser Gly Ile Lys Ser Thr Glu Thr Gln Pro Ser Ser  
 195 200 205  
 Thr Thr Pro Lys Cys Gly His Tyr Pro Glu Glu Ser Glu Asp Thr Val  
 210 215 220  
 Thr Asp Val Ser Pro Leu Ser Thr Pro Asp Ile Ser Pro Leu Gln Ser  
 225 230 235 240  
 Phe Glu Leu Gly Ile Ala Asn Asp Gln Lys Val Lys Ile Lys Lys Gln  
 245 250 255  
 Glu Asn Val Ser Gln Glu Ile Tyr Glu Asp Val Glu Asp Leu Lys Asn  
 260 265 270  
 Asn Ser Lys Tyr Leu Lys Ala Ala Lys Lys Gly Glu Glu Asn Leu Gly  
 275 280 285  
 Leu Leu  
 290

&lt;210&gt; 5379

&lt;211&gt; 59

&lt;212&gt; PRT`

&lt;213&gt; Homo sapiens

&lt;400&gt; 5379

Pro Lys Thr Ala Phe Asp Ser Cys Ser Pro Thr Cys Ser Ser Pro Ser  
 1 5 10 15  
 Phe Leu His Leu Arg Asn Val Thr Ser Ser Ala Lys Ser Phe Pro Asp  
 20 25 30  
 Leu Ser Lys Ile Ile Thr Ser Ser Val Cys Cys Gly Asn Leu Tyr Arg  
 35 40 45  
 Met Val Gly Lys Phe Gln Val Ser Tyr Leu Asp  
 50 55

&lt;210&gt; 5380

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5380

Lys Leu Leu Leu Phe Ser Leu Ser Ile Leu Leu Phe Phe Gly Lys Gln



## 4788

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ser Leu Ser Pro Val Met Gly Gly Gly Gly Trp Glu Arg Leu His Ser | 20  | 25  | 30  |
| Thr Pro Trp Lys Trp Glu Tyr Pro Tyr Val Val Phe Gly Ile Phe Leu | 35  | 40  | 45  |
| Tyr Gly Lys Phe Val Ser Pro Ser His Pro Asn Leu Phe Thr Ser Val | 50  | 55  | 60  |
| Trp Thr His Val Tyr Phe Val Phe Trp Val Thr Gln Tyr Leu Phe Cys | 65  | 70  | 75  |
| Cys Leu Ser Cys Pro Ala Trp Leu Leu Gly Val Leu Pro Gly Trp Leu | 85  | 90  | 95  |
| Leu Cys Pro Phe Asp Val Pro Ile Leu Leu Ile Phe Glu His Phe Leu | 100 | 105 | 110 |
| Leu Ser Gly Thr Thr Arg Cys Ser Arg Phe Ile Leu Asp Ile Pro Cys | 115 | 120 | 125 |
| Pro Asn Pro Arg Ile Pro Arg Ile Asn Pro Cys Ser Lys Glu Pro Trp | 130 | 135 | 140 |
| Phe Leu Leu Leu Glu Asn His Thr                                 | 145 | 150 |     |

&lt;210&gt; 5381

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (62)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5381

|   |    |    |    |    |
|---|----|----|----|----|
| Phe Leu Cys Ser Val Val Tyr Phe Phe Phe Leu Leu Leu Leu Ser Pro | 1  | 5  | 10 | 15 |
| Leu Ser Pro Leu Lys Ala Gly Asn Arg Leu Leu Glu Asn Leu Arg Gly | 20 | 25 | 30 |    |
| Lys Arg Ile Leu Phe Thr Gly Gly Ser Arg Lys Leu Ser Glu Arg Ser | 35 | 40 | 45 |    |

## 4789

Ile Val Leu Ser Pro Phe Pro Leu Ser Phe Gln Phe Gly Xaa Trp Trp  
 50 55 60

Ser Glu Glu Glu Lys Glu Ile Leu Cys Met Tyr Val  
 65 70 75

<210> 5382

<211> 50

<212> PRT

<213> Homo sapiens

<400> 5382

Gly Asp Asp Phe Gly Arg Asn Pro Phe Gly Thr Thr His Pro Ala Met  
 1 5 10 15

Ser Val Glu Lys Trp Asn Cys Asn Pro Gln Glu Ser His Phe Ile Phe  
 20 25 30

Leu Pro Phe Lys Trp Leu Ile Lys Gly Ser Ala Ser Ser Thr Gly Phe  
 35 40 45

Met Glu  
 50

<210> 5383

<211> 133

<212> PRT

<213> Homo sapiens

<400> 5383

Asn Ala His Ala Gly Arg Tyr Cys Ser Tyr Gln Tyr Phe Ala Phe Tyr  
 1 5 10 15

Asn Lys Gly Leu Phe Ile Leu Met Pro Phe Leu Gln Asp Phe Phe Val  
 20 25 30

Ile Ser Val His Met Lys Met Leu Thr Leu Asn Ile Asn Thr Trp Arg  
 35 40 45

Pro Cys Pro Val Ala Leu Pro Trp Leu Pro Ala Trp Ser Val Phe Pro  
 50 55 60

Cys Gly Phe Thr Cys Gly Pro Ala Val Ala Thr Ser Met Val Cys Val  
 65 70 75 80

Leu Val Asp Ser Leu Gln Leu Ser Asp Ala Ser Phe Cys His Asn His  
 85 90 95

## 4790

Leu Phe Pro Asp Thr Ile Val Leu Ile Leu Phe Gln Asn Cys Lys Ile  
100 105 110

Ile Ser Ser Leu Lys Cys Lys Gly Cys Phe Cys Ser Val Ser Val Phe  
115 120 125

Phe Glu Ile Lys Leu  
130

<210> 5384

<211> 74

<212> PRT

<213> Homo sapiens

<400> 5384

Tyr Leu Phe Ser Leu Leu Phe Met Ser Leu Cys Arg Ile Leu Gly Tyr  
1 5 10 15

Ser Phe Ser Ser Arg Leu Ser Ser Leu Ile Leu Pro Leu Ala Val Phe  
20 25 30

His Tyr Cys Leu Ser Cys Pro Leu His Phe Lys Leu Ser Phe Lys Tyr  
35 40 45

Leu Pro Phe Pro Ser Phe Pro Phe Ser Ser Leu Pro Cys Pro Ala Leu  
50 55 60

Pro Cys Pro Ala Leu Pro Ser Pro Pro Leu  
65 70

<210> 5385

<211> 71

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (42)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (59)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

## 4791

&lt;221&gt; SITE

&lt;222&gt; (70)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5385

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Phe | Asp | Phe | Phe | His | Gln | Arg | Phe | Cys | Phe | Pro | Ala | Ile | Asp | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Tyr | Leu | Leu | Leu | Asp | Leu | Tyr | Leu | Lys | Val | Leu | Ser | Phe | Trp | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Cys | Phe | Cys | Thr | Cys | Phe | Ala | Asn | Xaa | Phe | Leu | Asn | Ser | Lys | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Cys | Leu | Ala | Tyr | Asn | Asn | Leu | Asn | Phe | Xaa | Tyr | Ile | Asn | Pro | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Glu | Pro | Lys | Xaa | Thr |
| 65  |     |     |     |     | 70  |     |

&lt;210&gt; 5386

&lt;211&gt; 74

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5386

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Asn | Cys | Ala | Phe | Lys | Lys | Lys | Asn | Arg | Gln | Thr | Phe | Glu | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Glu | Gly | Ser | Cys | Pro | Val | Phe | Gln | Lys | Ser | Phe | Phe | Pro | Ala | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asn | Val | Lys | Pro | Asn | Leu | Ala | Thr | Lys | Ile | Asn | Glu | Lys | Met | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Pro | Leu | Val | Leu | Ser | Leu | Ser | Cys | Ser | Trp | Leu | Cys | Tyr | Val | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Arg | Leu | Tyr | Pro | Asp | Lys | Met | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     |

&lt;210&gt; 5387

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5387

## 4792

Gly Lys Arg His Ile Phe Ser Leu Thr Gln Leu Ala Asp Thr Glu Val  
 1 5 10 15  
 Gly Arg Trp Gln Glu Lys Ala Ser Thr Glu Leu Ile Gln Thr Cys Arg  
 20 25 30  
 Lys Leu Pro Leu Leu Leu Leu Ser Lys Met Lys Gly Ser Gly Lys Arg  
 35 40 45  
 His Leu Pro Phe Pro Ala Leu Arg Ile Leu Ala Ser Leu Ser Leu Tyr  
 50 55 60

<210> 5388

<211> 220

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (156)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (169)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (220)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5388

Tyr Arg Glu Ser Trp Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro Gly  
 1 5 10 15  
 Ser Thr His Ala Ser Ala Asn Ser Phe Val Lys Phe Ala Asn Ile Glu  
 20 25 30  
 Glu Asp Thr Pro Ser Tyr His Arg Arg Tyr Asp Phe Phe Val Ser Arg  
 35 40 45  
 Phe Ser Ala Met Cys His Ser Cys His Ser Asp Pro Glu Ile Arg Thr  
 50 55 60

Glu Ile Arg Ile Ala Gly Ile Arg Gly Ile Gln Gly Val Val Arg Lys

## 4793

|   |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |
| Thr Val Asn Asp Glu Leu Arg Ala Thr Ile Trp Glu Pro Gln His Met |     |     |     |     |     |     |
|   | 85  |     |     | 90  |     | 95  |
| Asp Lys Ile Val Pro Ser Leu Leu Phe Asn Met Gln Lys Ile Glu Glu |     |     |     |     |     |     |
|   | 100 |     | 105 |     | 110 |     |
| Val Asp Ser Arg Ile Gly Pro Pro Ser Ser Pro Ser Ala Thr Asp Lys |     |     |     |     |     |     |
|   | 115 |     | 120 |     | 125 |     |
| Glu Glu Asn Pro Ala Val Leu Ala Glu Asn Cys Phe Arg Glu Leu Leu |     |     |     |     |     |     |
|   | 130 |     | 135 |     | 140 |     |
| Gly Arg Ala Thr Phe Gly Asn Met Asn Asn Ala Xaa Arg Pro Val Phe |     |     |     |     |     |     |
| 145   |     | 150 |     | 155 |     | 160 |
| Ala His Leu Asp His His Lys Leu Xaa Asp Pro Asn Glu Phe Ala Val |     |     |     |     |     |     |
|   | 165 |     | 170 |     | 175 |     |
| His Cys Phe Lys Ile Ile Met Tyr Ser Ile Gln Ala Gln Tyr Ser His |     |     |     |     |     |     |
|   | 180 |     | 185 |     | 190 |     |
| His Val Ile Gln Glu Ile Leu Gly His Leu Asp Ala Arg Lys Lys Asp |     |     |     |     |     |     |
|   | 195 |     | 200 |     | 205 |     |
| Ala Pro Gly Phe Glu Gln Val Leu Phe Arg Phe Xaa                 |     |     |     |     |     |     |
|   | 210 |     | 215 |     | 220 |     |

&lt;210&gt; 5389

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (40)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4794

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (45)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (54)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (64)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5389

Leu Cys Val Arg Cys Ser Lys Lys Val Ala Gln Ser Val Met Arg Lys

1

5

10

15

Leu Xaa Gly Tyr Ile Leu Ser Arg Met Asn Arg Gln Asp Ser Leu Lys

20

25

30

Asn Phe Leu Gly Asn Glu Lys Xaa Ala Xaa Cys Asn Xaa Phe Met Pro

35

40

45

Ile Ile Pro Asn Thr Xaa Gly Gly Leu Lys Gly Glu Asp His Phe Xaa

50

55

60

Pro

65

&lt;210&gt; 5390

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5390

Ile Cys Glu Ile Leu Ser Leu Cys Pro Phe Pro Thr Ser Gly Pro Thr

1

5

10

15

Pro Gly Pro Ser Pro Thr Phe Leu Leu Ser Ser Leu Ala Val Val Ile

20

25

30

Ile Trp Gly Leu Tyr Cys Thr Tyr Pro Gly Cys Val Cys Val Gly Trp

35

40

45

Gly Gln Pro Phe Cys Thr Glu Leu Pro Gly Pro Leu Pro Pro Arg Pro

50

55

60

## 4795

Ser Ala Ser Leu Pro Thr His His Leu Lys Gly Arg Glu Leu Leu Phe  
 65 70 75 80

Leu Pro Val Leu Phe Cys Phe Leu Val Leu Pro Pro His Pro Thr Pro  
 85 90 95

Ser Leu Ile Tyr Pro Pro Ser Leu Ser Pro Phe Leu His Ser Gln Pro  
 100 105 110

His Phe Leu Phe Phe Trp Ser Val Trp  
 115 120

&lt;210&gt; 5391

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5391

Phe Thr Asn Trp Arg Leu Leu Ile Leu Ile His Leu Arg Phe Lys Ile  
 1 5 10 15

Phe Ile Asn Cys Lys Gln Cys Asn Tyr Leu Tyr Phe Thr Val Pro Ser  
 20 25 30

Gln Thr Phe His Leu Arg Phe Cys Cys Lys Lys His Gln Val Ser Xaa  
 35 40 45

Thr

&lt;210&gt; 5392

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5392

Leu Leu Ala Ala Gly Ile Ser Glu Glu Gly Leu Val Leu Ile Leu Lys



## 4796

1                      5                      10                      15  
 Val Leu Cys Ser Cys Pro Arg Pro Glu Xaa Thr His Ala Glu Thr Leu  
                             20                      25                      30  
 Pro Ser Pro Ser Lys Val Gln Gly Leu Val Thr Glu Tyr Trp Val Glu  
                             35                      40                      45  
 His Met Thr Gly Ser Gln Leu Ile Pro Pro Ser Leu Pro Val Lys Pro  
                             50                      55                      60  
 Gln Asp Ser Cys Phe Pro Gly Ser His Leu Arg Pro Leu Arg  
                             65                      70                      75

&lt;210&gt; 5393

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5393

Val Leu His His Val Leu Ile His Leu Ile Leu Thr Glu Ile Val Asn  
                             1                      5                      10                      15  
 Xaa Gly Ile Ile Leu Ile Leu Thr Leu Trp Ile Lys Lys Thr Lys Ala  
                             20                      25                      30  
 Gln Arg Val Lys Ala Ser Leu Pro Glu Ile Ile Asp Cys Lys Phe Glu  
                             35                      40                      45

Arg

&lt;210&gt; 5394

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5394

Ile Leu Thr Pro Pro Leu Cys Asp Ile Gln Lys Leu Asn Ser Lys Cys  
                             1                      5                      10                      15  
 Asn Lys His Leu Asn Ile Arg Ile Lys Thr Ile Lys Leu

## 4797

20

25

&lt;210&gt; 5395

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (168)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (180)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5395

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Glu | Ala | Glu | Phe | Ala | Met | Asp | Ser | Asn | His | Gln | Ser | Asn | Tyr | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Lys | Thr | Glu | Lys | Lys | Phe | Leu | Arg | Lys | Gln | Ile | Lys | Ala | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Thr | Leu | Leu | Arg | His | Glu | Gly | Ile | Glu | Thr | Val | Ser | Tyr | Ala | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ser | Leu | Val | Val | Ala | Asn | Gly | Gly | Leu | Gly | Asn | Gly | Val | Ser | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Gln | Leu | Leu | Pro | Val | Leu | Glu | Lys | Cys | Gly | Leu | Val | Asp | Ala | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Met | Pro | Pro | Asn | Lys | Pro | Tyr | Ser | Phe | Ala | Arg | Tyr | Arg | Thr | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Ser | Lys | Arg | Ala | Tyr | Val | Thr | Leu | Asn | Gly | Lys | Glu | Val | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Asp | Leu | Gly | Gln | Lys | Ile | Thr | Leu | Tyr | Leu | Asn | Phe | Val | Glu | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gln | Trp | Lys | Glu | Leu | Arg | Pro | Gln | Ala | Leu | Pro | Pro | Gly | Leu | Met |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Val | Glu | Glu | Ile | Ile | Ser | Ser | Glu | Glu | Glu | Lys | Met | Leu | Leu | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Asp | Trp | Thr | Glu | Asp | Xaa | Asp | His | Gln | Asn | Ser | Gln | Lys | Ile |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4798

165

170

175

Leu Lys Thr Xaa Lys Ser Lys Ala Phe Trp Leu  
 180 185

&lt;210&gt; 5396

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (58)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5396

Phe Phe Pro Phe Gly Asn Ser Val Asn Pro Ala Val Gly Cys Cys Leu  
 1 5 10 15

Ser Asp Tyr Lys Arg Leu Gly Ser Cys Phe Cys Phe Lys Cys Leu Arg  
 20 25 30

Leu Trp Ser Tyr Thr Leu Val Leu Leu Gly Gln Ser Glu His Cys Leu  
 35 40 45

Leu Cys Lys Ile Ile Ser Phe Arg Val Xaa Ser Cys Gln Ile Tyr Trp  
 50 55 60

Pro Leu Ile Gln Tyr Ser Trp Val Tyr Cys Met  
 65 70 75

&lt;210&gt; 5397

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (35)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4799

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5397

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Gln | Glu | Lys | Lys | Glu | Leu | Lys | Met | Glu | Lys | Ala | Thr | Val | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Val | Gly | Tyr | Arg | Arg | Arg | Asn | Ser | Gly | Ser | Thr | Xaa | Asp | Pro | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Xaa | Met | Ser | Phe | Gln | Glu | Trp | Asn | Pro | Ser | Leu | Val | Met | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Xaa | Pro | Val | Leu | Pro | Ala | Ser | Thr | Leu | Pro | Cys | Pro | Pro | Arg | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Glu | Ser | Ala | Ser | Gly | Phe | Leu | Met | Met | Val | Val | Val | Val | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

Val

&lt;210&gt; 5398

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5398

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Phe | Val | His | His | Asn | Phe | Cys | Ile | Tyr | Phe | Phe | Lys | Tyr | Cys | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ile | Ser | Phe | Ser | Leu | Ile | Ile | Glu | Phe | Phe | Gly | Leu | Arg | Phe | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | Ser | Phe | Phe | Phe | Ser | Phe | Phe | Pro | Pro | Leu | Phe | Phe | Gly | Cys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Lys | Phe | Cys | Pro | Lys | Ala | Gly | Thr | Ser | Leu | Ile | Ser | Ser | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gln | Pro | Cys | Trp | Leu | Val | Phe | Ser | Ile | Tyr | Phe | Ser | Lys | Ile | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

Val Ser Val

## 4800

&lt;210&gt; 5399

&lt;211&gt; 227

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5399

Phe Ile Leu Arg Arg Leu Thr Met Asn Glu Leu Asn Ser Val Ser Asp  
 1 5 10 15

Leu Asp Arg Cys His Leu Tyr Leu Met Val Leu Thr Glu Leu Ile Asn  
 20 25 30

Leu His Leu Lys Val Gly Trp Lys Arg Gly Asn Pro Ile Trp Arg Val  
 35 40 45

Ile Ser Leu Leu Lys Asn Ala Ser Ile Gln His Leu Gln Glu Met Asp  
 50 55 60

Ser Gly Gln Glu Pro Thr Val Gly Ser Gln Ile Gln Arg Val Val Ser  
 65 70 75 80

Met Ala Ala Leu Ala Met Val Cys Glu Ala Ile Asp Gln Lys Pro Glu  
 85 90 95

Leu Gln Leu Asp Ser Leu His Ala Gly Pro Leu Glu Ser Phe Leu Ser  
 100 105 110

Ser Leu Gln Leu Asn Gln Thr Leu Gln Lys Pro His Ala Glu Glu Gln  
 115 120 125

Ser Ser Tyr Ala His Pro Leu Glu Cys Ser Ser Val Leu Glu Glu Ser  
 130 135 140

Ser Ser Ser Gln Gly Trp Gly Lys Ile Val Ala Gln Tyr Ile His Asp  
 145 150 155 160

Gln Trp Val Cys Leu Ser Phe Leu Leu Lys Lys Tyr His Thr Leu Ile  
 165 170 175

Pro Thr Thr Gly Ser Glu Ile Leu Glu Pro Phe Leu Pro Ala Val Gln  
 180 185 190

Met Pro Ile Arg Thr Leu Gln Ser Ala Leu Glu Ala Leu Thr Val Leu  
 195 200 205

Ser Ser Asp Gln Val Leu Pro Val Phe His Cys Leu Lys Val Leu Val  
 210 215 220

Pro Asn Phe  
 225

## 4801

&lt;210&gt; 5400

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5400

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Thr | Cys | Arg | Phe | Leu | Leu | Met | Trp | Glu | Lys | Ile | Leu | Ile | Ile | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ile | Lys | Val | Ile | Ile | Phe | Ser | Tyr | Val | Tyr | Arg | Tyr | Leu | Tyr | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Asn | Glu | Leu | Leu | Met | Thr | Phe | Val | Tyr | Phe | Tyr | Leu | Gly | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Ser | His | Leu | Phe | Leu |
| 50  |     |     |     |     |     | 55  |

&lt;210&gt; 5401

&lt;211&gt; 90

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (78)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (84)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5401

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ala | Arg | Leu | Pro | Ser | Ala | Asn | Leu | Ser | Asn | Trp | Gly | Gly | Glu | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ser | Ser | Ser | Glu | Gly | Arg | Ala | Arg | Cys | Gln | Ile | Cys | Ser | Ser | Ala |
|     |     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Ser | Ala | Ala | Arg | Arg | Arg | Ala | Glu | Gly | Ala | Pro | Gly | Pro | Arg |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

## 4802

Pro Val Thr Gly Arg Ala Gly Ala Pro Ala Val Arg Gly Arg Arg Arg  
 50 55 60

Gly Pro Cys Arg Cys Trp Gly Thr Arg Tyr Arg Pro Cys Xaa Pro Arg  
 65 70 75 80

Pro Pro Pro Xaa Gly Pro Leu Leu Ala Pro  
 85 90

<210> 5402  
 <211> 48  
 <212> PRT  
 <213> Homo sapiens

<400> 5402  
 Ile Arg His Glu Glu Leu Arg Lys Glu Gly Phe Asp Pro Ala Ile Val  
 1 5 10 15

Lys Asp Pro Leu Phe Tyr Leu Asp Ala Gln Lys Gly Arg Tyr Val Pro  
 20 25 30

Leu Asp Gln Glu Ala Tyr Ser Arg Ile Gln Ala Gly Glu Glu Lys Leu  
 35 40 45

<210> 5403  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 5403  
 Phe Gly Thr Arg Thr Lys Pro Ile Lys Pro Ala Leu Lys Ser Ala Glu  
 1 5 10 15

Val Glu Leu Lys Thr Gly Gly Asn Asn Ser Asn Gln Val Ser Glu Thr  
 20 25 30

Asp Glu Lys Glu Asp Leu Leu His Glu Asn Arg Leu Met Gln Asp Glu  
 35 40 45

Ile Ala Arg Leu Arg Leu Glu Lys Asp Thr Ile Lys Asn Gln Asn Leu  
 50 55 60

Glu Lys Lys Tyr Leu Lys Asp Phe Glu Ile Val Lys Arg Lys His Glu

## 4803

65                                      70                                      75                                      80

Asp Leu Gln Lys Ala Leu Lys Arg Glu Trp Gly Asn Ile Ser Lys Asn

   85                                      90                                      95

Asp Ser Leu Leu

   100

<210> 5404

<211> 38

<212> PRT

<213> Homo sapiens

<400> 5404

Pro His Arg Thr Ala Phe Ser Cys Phe Ser Asp Thr Leu Met Lys Val

1                                      5                                      10                                      15

Trp Arg Ser Gly Asp Ile Ile Asp Lys Ile Tyr Gln Phe Pro Glu Lys

   20                                      25                                      30

Thr Leu Asp Leu Lys Thr

   35

<210> 5405

<211> 62

<212> PRT

<213> Homo sapiens

<400> 5405

Asp His Thr Gly Gln Arg Gly Leu His Ser His Leu Arg Leu Gln Asp

1                                      5                                      10                                      15

Gly Arg Pro Ala Ala Gly Gly Thr Arg Gly His Arg Ala Pro Leu Pro

   20                                      25                                      30

Leu Val Pro Asn Ser Cys Ser Pro Gly Asp Pro Leu Val Leu Glu Arg

   35                                      40                                      45

Pro Pro Pro Arg Trp Ser Thr Ser Phe Val Pro Leu Val Ser

   50                                      55                                      60

<210> 5406

<211> 183

<212> PRT

<213> Homo sapiens



## 4804

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (83)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (125)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (130)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5406

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Pro | Gln | Ala | Phe | Asn | His | Ile | Ala | Lys | Leu | Cys | Ser | Leu | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Val | Leu | Tyr | Arg | Thr | Lys | Val | Glu | Ile | Glu | Asp | Tyr | Asp | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Ser | Met | Ile | Gly | Ala | Lys | Cys | Lys | Lys | Leu | Arg | Thr | Leu | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Trp | Arg | Cys | Lys | Asn | Ile | Thr | Glu | Asn | Gly | Ile | Ala | Glu | Leu | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Cys | Pro | Leu | Leu | Glu | Glu | Leu | Asp | Leu | Gly | Trp | Cys | Gln | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Arg | Xaa | His | Arg | Val | Phe | Thr | Arg | Leu | Ala | His | Gln | Leu | Pro | Asn |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Lys | Leu | Phe | Leu | Thr | Ala | Asn | Arg | Ser | Val | Cys | Asp | Thr | Asp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Asp | Glu | Leu | Ala | Cys | Asn | Cys | Thr | Arg | Leu | Gln | Xaa | Leu | Asp | Ile |
|     |     | 115 |     |     |     |     |     | 120 |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Xaa | Thr | Arg | Met | Val | Ser | Pro | Ala | Ser | Leu | Arg | Lys | Leu | Leu | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Cys | Lys | Asp | Leu | Ser | Leu | Leu | Asp | Val | Ser | Phe | Cys | Ser | Gln | Ile |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Asn | Arg | Ala | Val | Leu | Glu | Leu | Asn | Ala | Ser | Phe | Pro | Lys | Val | Phe |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Ile | Lys | Lys | Ser | Phe | Thr | Gln |
|-----|-----|-----|-----|-----|-----|-----|

## 4805

180

&lt;210&gt; 5407

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5407

Ser Ser Trp Val Gly Gly Ser Leu Arg Gln Ala Ala Thr Leu Glu Gly  
 1 5 10 15

Glu Gln Gly Ser Ala Val Ser Ala Ala Ser His Ala Arg Ser Asp Leu  
 20 25 30

Ser Leu Gly Thr Pro Gln Glu Pro Glu Asp Ser Ser Gly Gln Cys Arg  
 35 40 45

Trp Gly Val Gly Gly Glu Ser Gly Arg Glu Ala Leu Arg Ala Pro Ser  
 50 55 60

Pro Thr Thr Asn Leu Ala Leu Val Val Ile Phe Arg Gln Asn Phe Val  
 65 70 75 80

Val Phe Phe Pro Phe Tyr Asp Gly Phe  
 85

&lt;210&gt; 5408

&lt;211&gt; 322

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5408

His Ile Xaa Thr His Thr Gly Glu Arg Pro Phe Lys Cys Pro Phe Glu  
 1 5 10 15

Gly Cys Gly Arg Ser Phe Thr Thr Ser Asn Ile Arg Lys Val His Val  
 20 25 30

Arg Thr His Thr Gly Glu Arg Pro Tyr Tyr Cys Thr Glu Pro Gly Cys  
 35 40 45

Gly Arg Ala Phe Ala Ser Ala Thr Asn Tyr Lys Asn His Val Arg Ile

## 4806

|   |     |         |
|---|-----|---------|
| 50  | 55  | 60      |
| His Thr Gly Glu Lys Pro Tyr Val Cys Thr Val Pro Gly Cys Asp Lys |     |         |
| 65  | 70  | 75 80   |
| Arg Phe Thr Glu Tyr Ser Ser Leu Tyr Lys His His Val Val His Thr |     |         |
|   | 85  | 90 95   |
| His Ser Lys Pro Tyr Asn Cys Asn His Cys Gly Lys Thr Tyr Lys Gln |     |         |
|   | 100 | 105 110 |
| Ile Ser Thr Leu Ala Met His Lys Arg Thr Ala His Asn Asp Thr Glu |     |         |
|   | 115 | 120 125 |
| Pro Ile Glu Glu Glu Gln Glu Ala Phe Phe Glu Pro Pro Pro Gly Gln |     |         |
|   | 130 | 135 140 |
| Gly Glu Asp Val Leu Lys Gly Ser Gln Ile Thr Tyr Val Thr Gly Val |     |         |
| 145   | 150 | 155 160 |
| Glu Gly Asp Asp Val Val Ser Thr Gln Val Ala Thr Val Thr Gln Ser |     |         |
|   | 165 | 170 175 |
| Gly Leu Ser Gln Gln Val Thr Leu Ile Ser Gln Asp Gly Thr Gln His |     |         |
|   | 180 | 185 190 |
| Val Asn Ile Ser Gln Ala Asp Met Gln Ala Ile Gly Asn Thr Ile Thr |     |         |
|   | 195 | 200 205 |
| Met Val Thr Gln Asp Gly Thr Pro Ile Thr Val Pro Ala His Asp Ala |     |         |
|   | 210 | 215 220 |
| Val Ile Ser Ser Ala Gly Thr His Ser Val Ala Met Val Thr Ala Glu |     |         |
| 225   | 230 | 235 240 |
| Gly Thr Glu Gly Gln Gln Val Ala Ile Val Ala Gln Asp Leu Ala Ala |     |         |
|   | 245 | 250 255 |
| Phe His Thr Ala Ser Ser Glu Met Gly His Gln Gln His Ser His His |     |         |
|   | 260 | 265 270 |
| Leu Val Thr Thr Glu Thr Arg Pro Leu Thr Leu Val Ala Thr Ser Asn |     |         |
|   | 275 | 280 285 |
| Gly Thr Gln Ile Ala Val Gln Leu Gly Glu Gln Pro Ser Leu Glu Glu |     |         |
|   | 290 | 295 300 |
| Ala Ile Arg Ile Ala Ser Arg Ile Gln Gln Gly Glu Thr Pro Gly Leu |     |         |
| 305   | 310 | 315 320 |
| Asp Asp   |     |         |

4807

&lt;210&gt; 5409

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5409

Leu Arg Leu Gln Glu Pro Ala Thr Thr His Pro Cys Pro Pro Thr Leu  
1 5 10 15

Gly Leu Ile Phe Val Thr Ser Pro His Tyr Ser Glu Leu Val Arg Pro  
20 25 30

Leu His Phe Cys Phe Thr Gln Leu Thr Trp Phe Ala His Thr Asp Thr  
35 40 45

Asn Lys His Leu Ser Ile Pro Met Ser Leu Leu Ser Ser Lys Asn Thr  
50 55 60

&lt;210&gt; 5410

&lt;211&gt; 27

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5410

Ser Thr His Ala Ser Gly Ser Arg Ser Arg Ala Ala Ala Leu Phe Phe  
1 5 10 15

Phe Phe Lys Arg Phe Cys Thr Gly Lys Lys Lys  
20 25

&lt;210&gt; 5411

&lt;211&gt; 205

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5411

Ala Ala Ala Ala Gly Asp Pro Gly Ala Met Gly Arg Ala Arg Asp  
1 5 10 15

Ala Ile Leu Asp Ala Leu Glu Asn Leu Thr Ala Glu Glu Leu Lys Lys

## 4808

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|
| 20  |     |     |     |     |     |     | 25  |     |     |     |     |     |     | 30  |     |  |  |  |  |  |
| Phe | Lys | Leu | Lys | Leu | Leu | Ser | Val | Pro | Leu | Arg | Glu | Gly | Tyr | Gly | Arg |  |  |  |  |  |
| 35  |     |     |     |     |     |     | 40  |     |     | 45  |     |     |     |     |     |  |  |  |  |  |
| Ile | Pro | Arg | Gly | Ala | Leu | Leu | Ser | Met | Asp | Ala | Leu | Asp | Leu | Thr | Asp |  |  |  |  |  |
| 50  |     |     |     |     |     |     | 55  |     |     | 60  |     |     |     |     |     |  |  |  |  |  |
| Lys | Leu | Val | Ser | Phe | Tyr | Leu | Glu | Thr | Tyr | Gly | Ala | Glu | Leu | Thr | Ala |  |  |  |  |  |
| 65  |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |     |  |  |  |  |  |
| Asn | Val | Leu | Arg | Asp | Met | Gly | Leu | Gln | Glu | Met | Ala | Gly | Gln | Leu | Gln |  |  |  |  |  |
|     |     |     |     | 85  |     |     | 90  |     |     |     |     | 95  |     |     |     |  |  |  |  |  |
| Ala | Ala | Thr | His | Gln | Gly | Ser | Gly | Ala | Ala | Pro | Ala | Gly | Ile | Gln | Ala |  |  |  |  |  |
|     |     |     |     | 100 |     |     | 105 |     |     |     |     | 110 |     |     |     |  |  |  |  |  |
| Pro | Pro | Gln | Ser | Ala | Ala | Lys | Pro | Gly | Leu | His | Phe | Ile | Asp | Gln | His |  |  |  |  |  |
| 115 |     |     |     |     |     |     | 120 |     |     | 125 |     |     |     |     |     |  |  |  |  |  |
| Arg | Ala | Ala | Leu | Ile | Ala | Arg | Val | Thr | Asn | Val | Glu | Trp | Leu | Leu | Asp |  |  |  |  |  |
| 130 |     |     |     |     |     |     | 135 |     |     | 140 |     |     |     |     |     |  |  |  |  |  |
| Ala | Leu | Tyr | Gly | Lys | Val | Leu | Thr | Asp | Glu | Gln | Tyr | Gln | Ala | Val | Arg |  |  |  |  |  |
| 145 |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |     |     |     |  |  |  |  |  |
| Ala | Glu | Pro | Thr | Asn | Pro | Ser | Lys | Met | Arg | Lys | Leu | Phe | Ser | Phe | Thr |  |  |  |  |  |
|     |     |     |     | 165 |     |     | 170 |     |     |     |     | 175 |     |     |     |  |  |  |  |  |
| Pro | Ala | Trp | Asn | Trp | Thr | Cys | Lys | Asp | Leu | Leu | Leu | Gln | Ala | Leu | Arg |  |  |  |  |  |
|     |     |     | 180 |     |     | 185 |     |     |     |     | 190 |     |     |     |     |  |  |  |  |  |
| Glu | Ser | Gln | Ser | Tyr | Leu | Val | Glu | Asp | Leu | Glu | Arg | Ser |     |     |     |  |  |  |  |  |
| 195 |     |     |     |     |     |     | 200 |     |     | 205 |     |     |     |     |     |  |  |  |  |  |

<210> 5412

<211> 158

<212> PRT

<213> Homo sapiens

<400> 5412

Ser Cys Cys Arg Cys Arg Cys Ala Arg Ala Thr Gly Ala Arg Asp Ala  
1 5 10 15

Ile Leu Asp Ala Leu Glu Asn Leu Thr Ala Glu Glu Leu Lys Lys Phe  
20 25 30

Lys Leu Val Ser Phe Tyr Leu Glu Thr Tyr Gly Ala Glu Leu Thr Ala  
35 40 45

## 4809

Asn Val Leu Arg Asp Met Gly Leu Gln Glu Met Ala Gly Gln Leu Gln  
 50 55 60  
 Ala Ala Thr His Gln Gly Ser Gly Ala Ala Pro Ala Gly Ile Gln Ala  
 65 70 75 80  
 Pro Pro Gln Ser Ala Ala Lys Pro Gly Leu His Phe Ile Asp Gln His  
 85 90 95  
 Arg Ala Ala Leu Ile Ala Arg Val Thr Asn Val Glu Trp Leu Leu Asp  
 100 105 110  
 Ala Leu Tyr Gly Lys Val Leu Thr Asp Glu Gln Tyr Gln Ala Val Arg  
 115 120 125  
 Pro Ser Pro Pro Thr Gln Ala Arg Cys Gly Ser Ser Ser Val Ser His  
 130 135 140  
 Gln Pro Gly Thr Gly Pro Ala Arg Thr Cys Ser Ser Arg Pro  
 145 150 155

&lt;210&gt; 5413

&lt;211&gt; 40

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5413

Pro Glu Phe Pro Gly Arg Pro Thr Arg Pro Lys Lys Lys Gln Met Leu  
 1 5 10 15  
 Lys Ser Tyr Trp Gln Ser Lys Leu Lys Leu Ala Ala Ile Phe Tyr Ile  
 20 25 30  
 Ile Ile Ser Ala Asn Pro Ile Phe  
 35 40

&lt;210&gt; 5414

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (67)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4810

&lt;400&gt; 5414

Ser Cys Leu Met Phe Phe Asn Met Pro Ser Tyr Lys Tyr Phe Ile Gln  
 1 5 10 15  
 Tyr Val Val Phe Val Asn Leu Thr Asn Asp Ile Lys His Lys Leu Gln  
 20 25 30  
 Cys Arg Gln Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
 35 40 45  
 Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
 50 55 60  
 Lys Gly Xaa Pro Phe  
 65

&lt;210&gt; 5415

&lt;211&gt; 186

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5415

Ala His Ala Ser Asp Leu Arg Ala Glu Glu Ile Asp Pro Val Tyr Phe  
 1 5 10 15  
 Asp Leu His Pro Gly Gln Gly His Thr Lys Pro Glu Tyr Tyr Tyr Pro  
 20 25 30  
 Asn Phe Leu Pro Ser Pro Phe Ser Ser Trp Asp Leu Arg Asp Met Ala  
 35 40 45  
 Leu Leu Leu Asn Ala Glu Asn Lys Thr Glu Ala Val Pro Arg Val Gly  
 50 55 60  
 Gly Leu Leu Gly Lys Tyr Ile Asp Arg Leu Ile Gln Leu Glu Trp Leu  
 65 70 75 80  
 Gln Val Gln Thr Val Gln Cys Glu Lys Ala Lys Gly Gly Lys Ala Arg  
 85 90 95  
 Pro Pro Thr Ala Pro Gly Thr Ser Gly Ala Leu Lys Ser Pro Gly Arg  
 100 105 110  
 Ser Lys Leu Ile Ala Ser Ala Leu Ser Lys Pro Leu Pro His Gln Glu  
 115 120 125  
 Gly Ala Ser Lys Ser Gly Pro Ser Arg Lys Lys Ala Phe His His Glu  
 130 135 140

**4811**

Glu Ile His Pro Ser His Tyr Ala Phe Glu Thr Ser Pro Arg Pro Ile  
 145 150 155 160

Asp Val Leu Gly Gly Thr Arg Phe Cys Ser Gln Arg Gln Thr Leu Glu  
 165 170 175

Met Arg Thr Glu Glu Lys Lys Lys Lys Lys  
 180 185

<210> 5416

<211> 39

<212> PRT

<213> Homo sapiens

<400> 5416

Cys Tyr Ser Cys Gln Thr Asn Ser Ala Lys Ile Phe Lys Val Thr Arg  
 1 5 10 15

Gly Lys Arg Met Thr Asn Arg Ser Ala Ser Glu Tyr Ile Phe Gln Asn  
 20 25 30

Val Gly Lys Lys Leu Leu Asn  
 35

<210> 5417

<211> 54

<212> PRT

<213> Homo sapiens

<400> 5417

Gly Ile Ser Ser Gly Arg Thr Arg Arg Glu Ser Cys Glu Leu Tyr Cys  
 1 5 10 15

Ile Met Tyr Ile Pro Asp Leu Ile Leu Tyr Arg Thr Phe Tyr Ser Asp  
 20 25 30

Ile Asn Leu Leu His Lys His Phe Ser Asn Asp Thr Lys Ile Thr Asp  
 35 40 45

Lys Ile Tyr Tyr Ile Gln  
 50

<210> 5418

<211> 91

<212> PRT



## 4812

<213> Homo sapiens

<400> 5418

Val Pro Pro Thr Pro Gly Gln His Gln Asp Gly Ser Ser Leu Gly Ala  
1 5 10 15  
Phe Val Ser Pro Pro Cys Leu Cys Ser Glu Cys Ala Pro His Phe Ser  
20 25 30  
Ala Thr Leu Thr Leu Ser Leu Ile Trp Ser Cys Leu Thr Ser Leu Leu  
35 40 45  
Tyr Ala Leu Leu Leu Ser Ile Ser Ser Ala Leu Met Pro Ala Gly Val  
50 55 60  
Met Pro Glu Ile Ile Ser Glu Lys Ala Arg Gln Phe Cys Val Cys Val  
65 70 75 80  
Cys Ala His Arg Gly Val Leu Val Val Leu Ile  
85 90

<210> 5419

<211> 36

<212> PRT

<213> Homo sapiens

<400> 5419

Val Lys Asn Gly Lys Gln Lys Val Thr Ala Val Met Asn Ile Leu Val  
1 5 10 15  
Gln Ile Leu Val Leu Asn Leu Thr Pro Glu Ser Lys Ile Leu Gly Ser  
20 25 30  
Leu Phe Pro Val  
35

<210> 5420

<211> 96

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (52)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

## 4813

&lt;221&gt; SITE

&lt;222&gt; (72)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (96)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5420

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ser | Lys | Glu | Asn | Arg | Asn | Gln | Phe | Glu | Gly | Leu | Gln | Gly | Gly | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Gln | Leu | Ser | Ile | Asn | Thr | Tyr | Gly | Val | Ile | Ala | Val | Phe | Ser |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Val | Leu | Leu | Arg | Ser | Gly | Phe | Leu | Gly | Leu | His | Ala | Ala | Met |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Asp | Xaa | Pro | Ser | Val | Trp | Gly | Ser | Leu | Lys | Gln | Arg | Thr | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Leu | Ile | Asn | Leu | Ser | Xaa | Lys | Lys | Val | Lys | Lys | Asn | Pro | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Pro | Pro | Asp | Leu | Arg | Ala | Arg | His | His | Leu | Asp | Arg | Arg | Leu | Xaa |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

&lt;210&gt; 5421

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5421

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asn | Ile | Ser | Ser | Xaa | Leu | Ile | Gly | Pro | Thr | Xaa | Val | Phe | Arg | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     | 15  |     |     |     |

## 4814

Met Lys Leu Arg Phe Phe Cys Val Trp Leu His His Glu Ile Leu Arg  
                   20                  25                  30

Arg Pro Lys Pro  
                   35

<210> 5422

<211> 65

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (57)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5422

Xaa Lys Cys Lys Tyr Lys Thr Phe Gln Ile Lys Ile Glu Tyr Ala His  
   1                  5                  10                  15

Cys Ser Lys Ala Lys Leu Leu Pro Tyr Tyr Ile Tyr Phe Thr Ser Leu  
                   20                  25                  30

Ile Phe Ser Pro Ser Lys Met His Trp Tyr Ser Gly Leu Glu Ser Glu  
                   35                  40                  45

Ser Phe Ala Ile Lys Leu Thr Tyr Xaa Gly Phe Asn Pro Leu Lys Val  
                   50                  55                  60

Gln

65

<210> 5423

<211> 67

<212> PRT

<213> Homo sapiens

<400> 5423

Gly Thr Ser Arg Pro Ser His Tyr His Val Leu Trp Asp Asp Asn Cys  
   1                  5                  10                  15

[illegible]

<213> Homo sapiens

<223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

Pro Ile Gly Trp Lys Thr Arg Pro Ile Glu Glu Leu Gly Asn Val Ser  
1 5 10 15

Phe Cys Tyr Phe Cys Tyr Ser Ser Leu Gly Phe Ile Val Ser Phe Phe  
20 25 30

Ile Phe Lys Ile Leu Cys Leu Lys Val Phe Leu Leu Asn Tyr Glu Val  
35 40 45

Asp Met His Val Tyr Ile Tyr Val Lys Tyr Leu Leu Cys Lys Val Phe  
50 55 60

Phe Val Tyr Ser Leu Lys Arg Ser Leu Tyr Leu Asn Lys Ser Glu Gly  
65 70 75 80

Gln Gln Xaa Lys Xaa Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys

85 90 95

## 4816

<210> 5425

<211> 25

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (9)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5425

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Pro | Val | Val | Pro | Ala | Thr | Xaa | Glu | Ala | Lys | Val | Gly | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Pro | Gly | Arg | Gln | Arg | Leu | Gln |
|     |     |     | 20  |     |     |     | 25  |     |

<210> 5426

<211> 82

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (51)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (60)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (71)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (74)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5426

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gln | Ser | Arg | Gln | Gly | Ile | Pro | Asn | Arg | Ile | Asn | Ser | Arg | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Gln | Lys | Pro | Cys | Lys | Pro | Arg | Lys | Ala | Met | Gly | Asp | Ile | Leu | Gln |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4817

20 25 30  
 Asn Ala Glu Ile Lys Thr Val Gln Gln Thr Phe Pro His Pro Gln Gln  
 35 40 45  
 Lys Ser Xaa Asn Lys Gly Lys Ser Cys Cys Met Xaa Asn Leu Asn Lys  
 50 55 60  
 Ile Gly Phe Pro Ala Gly Xaa Phe Gly Xaa Asn Phe Pro Pro Leu Asn  
 65 70 75 80  
 Val Pro

&lt;210&gt; 5427

&lt;211&gt; 168

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5427

Arg Gly Leu Ala Xaa Lys His Pro Gly Arg Val Gly Gln Ala Ala Leu  
 1 5 10 15  
 Tyr Gly Cys Gly Cys Trp Ala Glu Asn Thr Gly Ala His Asn Pro Tyr  
 20 25 30  
 Ser Thr Ala Val Ser Thr Ser Gly Cys Gly Glu His Leu Val Arg Thr  
 35 40 45  
 Ile Leu Ala Arg Glu Cys Ser His Ala Leu Gln Ala Glu Asp Ala His  
 50 55 60  
 Gln Ala Leu Leu Glu Thr Met Gln Asn Lys Phe Ile Ser Ser Pro Phe  
 65 70 75 80  
 Leu Ala Ser Glu Asp Gly Val Leu Gly Gly Val Ile Val Leu Arg Ser  
 85 90 95  
 Cys Arg Cys Ser Ala Glu Pro Asp Ser Ser Gln Asn Lys Gln Thr Leu  
 100 105 110  
 Leu Val Glu Phe Leu Trp Ser His Thr Thr Glu Ser Met Cys Val Gly  
 115 120 125

## 4818

Tyr Met Ser Ala Gln Asp Gly Lys Ala Lys Thr His Ile Ser Arg Leu  
 130 135 140

Pro Pro Gly Ala Val Ala Gly Gln Ser Val Ala Ile Glu Gly Gly Val  
 145 150 155 160

Cys Arg Leu Glu Ser Pro Val Asn  
 165

<210> 5428

<211> 81

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (72)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5428

Phe Asn Phe Glu Phe Lys Pro Lys Phe Ile Gly Arg Leu Pro Phe Asp  
 1 5 10 15

Leu Pro Leu Pro Pro His Leu Val Leu Ser Cys Ile Tyr Thr Pro Gly  
 20 25 30

Pro Cys Gly Gly Ala Ala Gly Gly Ser Cys Ala Pro Glu Met Arg Leu  
 35 40 45

Glu Arg Glu Leu Ala Ser Leu Leu Pro Ser Ser Val Ser Lys Glu Pro  
 50 55 60

Arg Pro Ser Gly Pro Ala Ser Xaa Lys Arg Trp Trp Asn Pro Cys Ala  
 65 70 75 80

Gly

<210> 5429

<211> 56

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (40)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4819

&lt;400&gt; 5429

Tyr Met Leu Gly Glu Lys Ile Tyr Glu Asn Phe Thr Ile Ile Phe Cys  
1 5 10 15

Leu Asp Asn Arg Ser Glu Gly Phe Tyr Pro Thr Trp Lys Val Lys Gly  
20 25 30

Leu Gly Leu Thr Asp Phe Leu Xaa Phe Ser Leu Asp Phe Met Lys Ser  
35 40 45

Met Leu Ser Phe Ser Gln Lys His  
50 55

&lt;210&gt; 5430

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (57)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5430

Gln Cys Arg Glu Val His Leu Glu Lys Arg Arg Gly Glu Gly Leu Gly  
1 5 10 15

Val Ala Leu Val Glu Ser Gly Trp Gly Ser Leu Leu Pro Thr Ala Val  
20 25 30

Ile Ala Asn Leu Leu His Gly Gly Pro Xaa Glu Arg Ser Gly Ala Leu  
35 40 45

Ser Ile Gly Asp Pro Leu Thr Gly Xaa Lys Gly Asp Gln Pro  
50 55 60

&lt;210&gt; 5431

&lt;211&gt; 133

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



## 4820

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (36)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (129)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (130)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (132)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5431

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Gln | His | Trp | Ala | Ile | Arg | Asn | Asn | Phe | Leu | Lys | Ile | Thr | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Lys | Tyr | Leu | Lys | Phe | Lys | Tyr | Arg | Lys | Tyr | Leu | Lys | Gln | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Leu | Xaa | Gly | His | Asp | Thr | Ser | Ala | Leu | Trp | Gln | Cys | Arg | Leu |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Thr | Gln | Pro | Cys | Ser | Pro | Ser | Val | Cys | Ala | Pro | Ser | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Phe | Ala | Val | Ile | Thr | His | Thr | Gly | Leu | Pro | Val | Trp | Ser | Leu | Glu |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Pro | Gly | Phe | Gln | Ser | Thr | Val | Glu | His | Arg | Ile | Leu | Leu | Leu | Val |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Met | Phe | Asn | Glu | Leu | Tyr | Phe | Lys | Tyr | Gln | Arg | Leu | Leu | Asn | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Asn | Val | Cys | Phe | Ser | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Xaa | Xaa | Lys | Xaa | Lys |
|     |     |     |     | 130 |

&lt;210&gt; 5432

## 4821

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5432

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Lys | Gly | Glu | Trp | Ser | Gln | Tyr | Pro | Gln | Lys | Cys | Ser | Lys | Arg | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ser | Pro | Leu | Lys | Met | Ser | Leu | Phe | Leu | Ser | Met | Leu | Tyr | Pro | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Val | Glu | Gly | Trp | Gly | Asn | Gln | Lys | Ser | Arg | Phe | Thr | Phe | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Phe | Leu | Asn | Tyr | Ile | His | Phe | Leu | Lys | Arg | Asn | Lys | Lys | Cys | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

&lt;210&gt; 5433

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5433

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ile | Arg | Asn | Lys | Ile | Leu | Gly | Tyr | Phe | Ile | Xaa | Leu | Ala | Tyr | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | His | Asn | Leu | Arg | Ile | Thr | Val | Phe | Val | Glu | Glu | Ile | Arg | Gln | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Lys | Val | Ala | Lys | Glu | Ala | Ala | Asn | Arg | Trp | Thr | Asp | Asn | Ile | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ile | Lys | Ser | Trp | Ala | Lys | Arg | Lys | Phe | Gly | Phe | Glu | Glu | Asn | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Asp | Arg | Thr | Phe | Gly | Ile | Pro | Glu | Asp | Phe | Asp | Tyr | Ile | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     |

&lt;210&gt; 5434

## 4822

&lt;211&gt; 183

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5434

Gly Leu Leu Val Gly Val Gly Ala Ala Ala Val Met Pro Gly Ile Val  
 1 5 10 15

Glu Leu Pro Thr Leu Glu Glu Leu Lys Val Asp Glu Val Lys Ile Ser  
 20 25 30

Ser Ala Val Leu Lys Ala Ala Ala His His Tyr Gly Ala Gln Cys Asp  
 35 40 45

Lys Pro Asn Lys Glu Phe Met Leu Cys Arg Trp Glu Glu Lys Asp Pro  
 50 55 60

Arg Arg Cys Leu Glu Glu Gly Lys Leu Val Asn Lys Cys Ala Leu Asp  
 65 70 75 80

Phe Phe Arg Gln Ile Lys Arg His Cys Ala Glu Pro Phe Thr Glu Tyr  
 85 90 95

Trp Thr Cys Ile Asp Tyr Thr Gly Gln Gln Leu Phe Arg His Cys Arg  
 100 105 110

Lys Gln Gln Ala Lys Phe Asp Glu Cys Val Leu Asp Lys Leu Gly Trp  
 115 120 125

Val Arg Pro Asp Leu Gly Glu Leu Ser Lys Val Thr Lys Val Lys Thr  
 130 135 140

Asp Arg Pro Leu Pro Glu Asn Pro Tyr His Ser Arg Pro Arg Pro Asp  
 145 150 155 160

Pro Ser Pro Glu Ile Glu Gly Asp Leu Gln Pro Ala Thr His Gly Ser  
 165 170 175

Arg Phe Tyr Phe Trp Thr Lys  
 180

&lt;210&gt; 5435

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5435

Gly Thr Gly Cys Cys Ala Glu Gly Arg Pro Glu Ser Gln Ser Ile Phe  
 1 5 10 15

## 4823

Phe Thr Gly Ser Ala Gly Thr Gly Lys Ser Tyr Leu Leu Lys Arg Ile  
                     20                    25                    30

Leu Gly Ser Leu Pro Pro Thr Gly Thr Val Ala Thr Ala Ser Thr Gly  
                     35                    40                    45

Val Ala Ala Cys His Ile Gly Gly Thr Thr Leu His Ala Phe Ala Gly  
                     50                    55                    60

Lys  
   65

<210> 5436

<211> 48

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (18)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (34)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (42)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (44)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5436

His Xaa Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val  
   1                    5                    10                    15

Gln Xaa Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala  
                     20                    25                    30

4824

Arg Xaa Arg Glu Leu Val Ser Ser Phe Xaa Phe Xaa Phe Phe His Gly  
35 40 45

<210> 5437

<211> 62

&lt;212&gt; PRT

<213> Homo sapiens

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

<222> (46)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5437

Glu Leu Trp Ser Pro Cys Leu Val Leu Phe Lys Thr Leu Cys Tyr Thr  
1 5 10 15

Gly Val Asp Pro Gly Leu Lys Val Ile Gln Phe Trp Gly Leu Ser Leu  
20 25 30

Arg Lys Arg Ile Leu Lys Tyr Leu Thr Phe Ala Asn Ile Xaa Lys Ile  
35 40 45

Tyr Cys His Ile Asn Met Leu Leu Gly Pro Leu Leu Gly Pro  
50 55 60

<210> 5438

<211> 163

<212> PRT

<213> Homo sapiens

<400> 5438

Ser Phe Phe Phe Phe Ser Arg Ser His Val Ser Leu Leu Leu Pro Thr  
1 5 10 15

Ala Thr Tyr Phe Ile Pro His Gly Ser Arg His Ser Ser Thr Leu Thr  
20 25 30

Asn Phe Leu Thr Pro Ser Ser Phe Leu Glu Ile Ile Ser Ser Pro Cys  
35 40 45

Ala Glu Thr Val Ile Ala Leu Ser Ala Glu Met Ala Val Ser Ser Gln  
50 55 60

## 4825

Gln Gly Glu Ile Met Glu Ser Arg Ile Phe Phe Gln Gly Ser His Ala  
 65 70 75 80  
 His Phe Pro Thr Cys Met Asn Val Asp Thr Ala Ala Thr Val Leu Ala  
 85 90 95  
 Val Asn Val Asn Leu Ala Ser Asn His Cys Ser Gln Gly Asn Val Pro  
 100 105 110  
 Ile Arg Arg Arg Leu Ser Gly Thr Leu Ile Leu Thr Gly Arg Trp Asp  
 115 120 125  
 Ile Leu Arg Asp Pro Glu Ala Gly Cys His Leu Leu Asn Phe Pro Glu  
 130 135 140  
 Gly Cys Leu Gly Ile Cys Phe Leu Phe Ile Leu Glu Leu Phe Phe Leu  
 145 150 155 160  
 Phe Met Gly

&lt;210&gt; 5439

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (62)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (63)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (66)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5439

Gln Gly Ile Leu Tyr Phe His Tyr Asn Gln Ile Ile Glu Ile Thr Cys  
 1 5 10 15

Val Lys Gly Leu Gln Glu Tyr Ile Gln Phe Leu Asn Ile Leu Ile Tyr  
 20 25 30

## 4826

Leu Leu Ser Asp Asn Leu Ile Leu Leu Asn Tyr His Leu Pro Leu Ser  
35 40 45

Tyr Phe Ile Ile Asn Ser Val Gln Phe Pro Pro Lys Lys Xaa Xaa Tyr  
50 55 60

Leu Xaa Asn Ile  
65

<210> 5440

<211> 170

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (7)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (11)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (13)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (19)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (21)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (23)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (163)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4827

&lt;400&gt; 5440

```

Val Ile Pro Trp Arg Thr Xaa Ser Ala Asn Xaa Glu Xaa Asp Leu His
  1               5               10               15

Tyr Leu Xaa Leu Xaa Thr Xaa Thr Trp Ser Gly Arg Ile Thr Ile Asn
      20               25               30

Gly Glu Ser Pro Lys His Arg Ser Trp His Thr Leu Thr Pro Ile Ala
      35               40               45

Asp Asp Lys Leu Phe Leu Cys Gly Gly Leu Ser Ala Asp Asn Ile Pro
      50               55               60

Leu Ser Asp Gly Trp Ile His Asn Val Thr Thr Asn Cys Trp Lys Gln
      65               70               75               80

Leu Thr His Leu Pro Lys Thr Arg Pro Arg Leu Trp His Thr Ala Cys
      85               90               95

Leu Gly Lys Glu Asn Glu Ile Met Val Phe Gly Gly Ser Lys Asp Asp
      100            105            110

Leu Leu Ala Leu Asp Thr Gly His Cys Asn Asp Leu Leu Ile Phe Gln
      115            120            125

Thr Gln Pro Tyr Ser Leu Leu Arg Ser Cys Leu Asp Cys Ile Gly Lys
      130            135            140

Asn Ser Ile Met Leu Glu Ser Gln Ile Ser Leu Leu Pro Pro Lys Leu
      145            150            155            160

Leu Gln Xaa Val Leu Lys Lys Lys Lys Lys
      165            170

```

&lt;210&gt; 5441

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (111)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (112)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids



## 4828

&lt;400&gt; 5441

```

Ile Gly Ser Val Pro Ala Val Pro Asn Gly Gln Cys Ile Gly Lys His
 1             5             10             15

Lys Lys Cys Asp His Asn Val Asp Cys Ser Asp Lys Ser Asp Glu Leu
          20             25             30

Asp Cys Tyr Pro Thr Glu Glu Pro Ala Pro Gln Ala Thr Asn Thr Val
          35             40             45

Gly Ser Val Ile Gly Val Ile Val Thr Ile Phe Val Ser Gly Thr Val
          50             55             60

Tyr Phe Ile Cys Gln Arg Met Leu Cys Pro Arg Met Lys Gly Asp Gly
 65             70             75             80

Glu Thr Met Thr Asn Asp Tyr Val Val His Gly Pro Ala Ser Val Pro
          85             90             95

Leu Gly Tyr Val Pro His Pro Ser Ser Leu Ser Gly Ser Leu Xaa Xaa
          100             105             110

Met Ser Arg Gly Lys Ser Met Ile
          115             120

```

&lt;210&gt; 5442

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5442

```

Asn Met Tyr Lys Asn Gly Tyr Lys Met Val Glu Ala Thr Arg Ser Val
 1             5             10             15

Thr Gly Ile Ile His Ile Asn Thr Thr Lys Ile Gln Phe Asn Ala Lys
          20             25             30

Leu Asn Asp Ile Ile Leu His Gln Asn Leu Phe His Thr Lys Ala His
          35             40             45

Ala Ser Arg Val Ser Ile Arg
          50             55

```

&lt;210&gt; 5443

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4829

<220>  
 <221> SITE  
 <222> (73)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (84)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (105)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5443  
 Leu Leu Lys Arg Ser His Phe Asn Cys Phe Cys Tyr Ser Ile Tyr Cys  
 1 5 10 15  
 His Ser Lys Tyr Ile Leu Thr Gln Asn Lys Leu Asn Asn Leu Cys Met  
 20 25 30  
 Phe Val Cys Val Tyr Met His Thr Leu Phe Tyr Ile Lys Ile Leu Arg  
 35 40 45  
 Leu Tyr Ser His Cys Ala Leu Trp Asn Lys Ala Ile Tyr Ile Asn Val  
 50 55 60  
 Leu Tyr Val Tyr Val Leu Tyr Ile Xaa Lys Thr Phe His Leu Ile Tyr  
 65 70 75 80  
 Ile Cys Val Xaa Glu Tyr Met Cys Ala Cys Leu Ala Asp Ile Cys Ile  
 85 90 95  
 Lys Tyr Lys His Ser Val Val Ile Xaa Ala Ile Cys Glu Ile Val Asn  
 100 105 110  
 Phe Lys Ile Thr Ser Gly His Arg Leu Val Val Ile Ile  
 115 120 125

<210> 5444  
 <211> 287  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (114)

## 4830

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5444

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Met | Ala | Pro | Lys | Pro | Gly | Ala | Glu | Trp | Ser | Thr | Ala | Leu | Ser | 1   | 5   | 10  | 15  |
| His | Leu | Val | Leu | Gly | Val | Val | Ser | Leu | His | Ala | Ala | Val | Ser | Thr | Ala | 20  | 25  | 30  |     |
| Glu | Ala | Ser | Arg | Gly | Ala | Ala | Ala | Gly | Phe | Leu | Leu | Gln | Val | Leu | Ala | 35  | 40  | 45  |     |
| Ala | Thr | Thr | Thr | Leu | Ala | Pro | Gly | Leu | Ser | Thr | His | Glu | Asp | Cys | Leu | 50  | 55  | 60  |     |
| Ala | Gly | Ala | Trp | Val | Ala | Thr | Val | Ile | Gly | Leu | Pro | Leu | Leu | Ala | Phe | 65  | 70  | 75  | 80  |
| Asp | Phe | His | Trp | Val | Asn | Gly | Asp | Arg | Ser | Ser | Ala | Asn | Leu | Leu | Leu | 85  | 90  | 95  |     |
| Gly | Gly | Gly | Met | Val | Leu | Ala | Val | Ala | Gly | Gly | His | Leu | Gly | Pro | Glu | 100 | 105 | 110 |     |
| Ala | Xaa | Cys | Gly | Trp | Ser | Gly | Asn | Ala | Val | Gly | Gly | Arg | Ser | Asp | His | 115 | 120 | 125 |     |
| Pro | His | Cys | Ser | Cys | Leu | His | Gly | Gln | His | Leu | Trp | Asp | Val | Gly | Gly | 130 | 135 | 140 |     |
| Gly | Asp | Ala | Gly | Cys | Gly | Arg | Pro | Pro | Glu | Pro | Ala | Gly | Gly | Gly | Gln | 145 | 150 | 155 | 160 |
| Ala | Ala | Ala | Ala | Thr | Glu | Gly | Gly | Cys | Leu | Ser | Leu | Gly | Leu | Gly | Cys | 165 | 170 | 175 |     |
| Arg | Gln | Leu | Gly | Leu | Leu | Pro | Gly | Pro | Ala | Tyr | Thr | Ala | Pro | Pro | Val | 180 | 185 | 190 |     |
| Gly | Val | Thr | Val | Gly | Tyr | Ser | Gln | Ala | Gly | Phe | Leu | Pro | Cys | Arg | Thr | 195 | 200 | 205 |     |
| Leu | Ser | Leu | Pro | Pro | Ala | Cys | Ser | Trp | Arg | Leu | Leu | Pro | Arg | Gly | Arg | 210 | 215 | 220 |     |
| Leu | Phe | Cys | Leu | Leu | Lys | Trp | Val | Cys | Cys | Thr | Leu | Thr | Gly | Gln | Gly | 225 | 230 | 235 | 240 |
| Gln | Ser | Leu | Gly | Ala | Val | Leu | Trp | Pro | Arg | Val | Gly | Thr | Cys | Leu | Asp | 245 | 250 | 255 |     |

## 4831

Gln Asn Glu Arg Asp Arg Val Pro Asp Thr Phe Gly Gly Pro Asp Ser  
                   260                  265                  270

Gly Leu Asp Thr Val Val Asp Pro Glu Lys Arg Pro Ser Leu Gln  
                   275                  280                  285

<210> 5445

<211> 57

<212> PRT

<213> Homo sapiens

<400> 5445

Ser His Ala Cys Pro Leu Thr Phe Thr Arg Asn Ser Glu Lys Gln Ser  
   1                  5                  10                  15

Thr Tyr Phe Ala Thr Gln Trp Ser Ser Ser Leu Asn Thr Phe Ile Gln  
                   20                  25                  30

Arg Ser Thr Asn Tyr Asp Pro Pro Val Lys Ser Tyr Leu Ala Leu Val  
                   35                  40                  45

Phe Val Asn Lys Val Leu Leu Glu His  
           50                  55

<210> 5446

<211> 100

<212> PRT

<213> Homo sapiens

<400> 5446

Trp Cys Ser Arg Ala Val Pro Pro Pro Ser Leu Leu Pro Ala Ser Thr  
   1                  5                  10                  15

Ser Pro Pro Arg Ser Val Pro Pro Pro Ser Phe Ser Leu Ser Leu Lys  
                   20                  25                  30

Ser Val Ser Phe Gly Ser Pro Arg Ala Ser Leu Pro Arg Pro Ser Trp  
                   35                  40                  45

Met Arg Pro Pro Ser Pro Lys Pro Ala Cys Phe Ala Val Ser Pro Gly  
           50                  55                  60

Ser Trp Lys Leu Ala Gly Ala Arg Gly Trp Arg Gly His Gly Gly Val  
   65                  70                  75                  80

Gly Glu Gly Ser Leu Pro Phe Leu Val Arg Ser Ile Ile Val Asn Gly  
                   85                  90                  95

4832

Cys Thr Leu Phe  
100

&lt;210&gt; 5447

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5447

Arg Ser Trp Gly Ser Xaa Trp Lys Gln Glu Asp Pro Ile Gln Gln Arg  
1 5 10 15

Pro Leu Arg Leu Val Leu His Phe Leu Arg Glu Leu Ser Val Gly Ser  
20 25 30

His His Pro Ala His Trp Leu Pro Pro Lys Pro Pro Pro Leu Thr Ser  
35 40 45

Ala Asn Leu Leu Phe Gly Asp Pro Leu Ser Asp Pro Leu Cys Leu Pro  
50 55 60

Ser Trp Ser Ser Ser Trp Arg Ile Ser Gly Gln Arg Gly Gly Gln Arg  
65 70 75 80

Ser Phe Pro Ile Pro Pro Gln Arg Tyr Phe Leu Leu Gly Pro His Thr  
85 90 95

Leu Thr Pro Ser Ser Glu Met Asn Thr Phe Leu Leu Leu Leu Leu Arg  
100 105 110

Gln Ser Glu Thr Pro Ser  
115

&lt;210&gt; 5448

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5448

Leu Leu Val Ser Asp Leu Thr Leu Leu Ser Lys Tyr Ser Ile Ile Ala  
1 5 10 15

## 4833

Arg Phe Thr Glu Phe Arg Ser Leu Lys Val Tyr Ile Leu Phe Pro Tyr  
                   20                  25                  30

Val Asp Lys Leu Val Ser Leu Leu Leu Glu Tyr His Lys Val Phe Val  
           35                  40                  45

Lys Ile Thr Gln Val Ile Lys  
       50                  55

<210> 5449

<211> 98

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (19)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5449

His Ala Phe Phe Leu Lys Leu Phe Arg Val Val Glu Ile Ala Ala Cys  
       1                  5                  10                  15

His Ser Xaa His Thr Ser Ala Ala Lys Thr Gln Gly Gly His Val Tyr  
           20                  25                  30

Met Trp Gly Gln Cys Arg Gly Gln Ser Val Ile Leu Pro His Leu Thr  
           35                  40                  45

His Phe Ser Cys Thr Asp Asp Val Phe Ala Cys Phe Ala Thr Pro Ala  
       50                  55                  60

Val Ser Trp Arg Leu Leu Ser Val Gly Lys Lys Val Gln Gly His Phe  
       65                  70                  75                  80

Thr Gln Gly Gly Met Val Leu Pro Thr Asp Gln Phe Ser Cys Val Phe  
                   85                  90                  95

Ala Gly

<210> 5450

<211> 186

<212> PRT

<213> Homo sapiens

4834

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5450

Gly Gly Xaa Asp Gln Gly Gln Glu Pro Gly Pro Leu Glu Glu Gln Gln  
 1 5 10 15

Arg Leu Ala His Leu Glu Asp Lys Leu Arg Leu Leu Ala Gln Ala Arg  
 20 25 30

Asp Glu Ala Gln Gly Ala Cys Leu Gln Gln Lys Gln Val Val Ala Glu  
 35 40 45

Ala Gln Thr Arg Val Ser Gln Leu Gly Leu Gln Val Glu Gly Leu Arg  
 50 55 60

Arg Arg Leu Glu Glu Leu Gln Gln Glu Leu Ser Leu Lys Asp Gln Glu  
 65 70 75 80

Arg Val Ala Glu Val Ser Arg Val Arg Val Glu Leu Gln Glu Gln Asn  
 85 90 95

Gly Arg Leu Gln Ala Glu Leu Ala Ala Gln Glu Ala Leu Arg Glu Lys  
 100 105 110

Ala Ala Ala Leu Glu Arg Gln Leu Lys Val Met Ala Ser Asp His Arg  
 115 120 125

Glu Ala Leu Leu Asp Arg Glu Ser Glu Asn Ala Ser Leu Arg Glu Lys  
 130 135 140

Leu Arg Leu Arg Glu Ala Glu Ile Ala Arg Ile Arg Asp Glu Glu Ala  
 145 150 155 160

Gln Arg Ala Ser Phe Leu Gln Asn Ala Val Leu Ala Tyr Val Gln Ala  
 165 170 175

Ser Pro Val Arg Thr Leu Ser Pro Pro Lys  
 180 185

&lt;210&gt; 5451

&lt;211&gt; 40

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5451

Pro Met Ala Asn Pro Ile Leu Lys Leu Val Asn Ser Asp Gln Ser Tyr

## 4835

1                    5                    10                    15  
Phe Thr Tyr Pro Thr Gln Ser Gly Pro Lys Gln Ile Ala Gly Ser Ala  
                  20                    25                    30  
Ser Lys Pro Thr Phe Leu Pro Lys  
                  35                    40

<210> 5452  
<211> 69  
<212> PRT  
<213> Homo sapiens

<400> 5452  
Leu Ser Arg Lys Leu Leu Leu Leu Arg Phe Lys Asn Glu Asn Arg Cys  
1                    5                    10                    15  
Glu Phe Ser Lys Ile Leu Lys Asn Asn Ser Val Lys Asn Ser Gly Ala  
                  20                    25                    30  
Val Lys Glu Ser Trp Met Glu Leu Glu Val Thr Ile Leu Ser Asp Ile  
                  35                    40                    45  
Ser Gln Lys Gln Thr Asn Ile Ala Cys Ser Gln Leu Phe Ala Gly Ser  
                  50                    55                    60  
Lys Ser Gln Asn Asn  
65

<210> 5453  
<211> 129  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (115)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (117)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (122)



## 4836

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (123)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (127)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5453

Leu Glu Arg Gly Trp Cys Glu Ser Cys Leu Thr Thr Ala Pro Ser Pro  
1 5 10 15

Pro Cys Ala Ala Glu Gly Thr Pro Ala Ala His Arg Phe Gln Glu Ala  
20 25 30

Leu Ser Asp Phe Trp Leu Ala Leu Glu Gln Leu Arg Gly His Ala Ala  
35 40 45

Ile Asp Tyr Thr Gln Leu Gly Leu Arg Phe Lys Leu Gln Pro Gly Arg  
50 55 60

Cys Tyr Thr Met Trp Arg Arg His Ser Ala Ser Trp Gly Ser Gly Gln  
65 70 75 80

Arg Arg Gln Gln Pro Lys Gly Gly His Val Gln Val Ala Gly Gly Ser  
85 90 95

Leu Asn Gly Leu Asp Ser Ala Leu Asp Gln Val Gln Arg Arg Gly Ser  
100 105 110

Leu Pro Xaa Gly Xaa Ser Pro Gly Arg Xaa Xaa Pro Ala Pro Xaa Trp  
115 120 125

Thr

<210> 5454

<211> 84

<212> PRT

<213> Homo sapiens

<400> 5454

Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Ser Gly Asp Lys Leu  
1 5 10 15

## 4837

Lys Leu Asp Gln Thr His Leu Glu Thr Val Ile Pro Ala Pro Gly Lys  
                   20                  25                  30

Arg Ile Leu Val Leu Asn Gly Gly Tyr Arg Gly Asn Glu Gly Thr Leu  
           35                  40                  45

Glu Ser Ile Asn Glu Lys Thr Phe Ser Ala Thr Ile Val Ile Glu Thr  
       50                  55                  60

Gly Pro Leu Lys Gly Arg Arg Val Glu Gly Ile Gln Tyr Glu Asp Ile  
       65                  70                  75                  80

Ser Lys Leu Ala

<210> 5455

<211> 58

<212> PRT

<213> Homo sapiens

<400> 5455

Ile Phe Leu Leu Phe Ser Thr Phe Pro Gln Ile His Val Ser Glu Val  
       1                  5                  10                  15

Leu Ser Phe Gly His His Tyr Leu Ser Thr Leu Arg Asn Met Pro Ile  
           20                  25                  30

Asp Glu Val Asn Ile Leu Gly Ile Gln Arg Ile Tyr Gly Asn Val Asp  
       35                  40                  45

Lys Asp Ile Tyr Gln Asp Lys Ala Leu Glu  
       50                  55

<210> 5456

<211> 46

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (23)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (26)

<223> Xaa equals any of the naturally occurring L-amino acids

4838

&lt;400&gt; 5456

Glu Thr Thr Lys Gln Thr Gln Lys Lys Glu His Asn Asn Arg Asp Lys  
1 5 10 15

Ile Lys Phe Arg Gln Gln Xaa Thr Glu Xaa Ile Leu Lys Thr Arg Ile  
20 25 30

Cys Ser Leu Arg Ile Phe Phe Ile Ile Lys Met Ile Phe Gly  
35 40 45

&lt;210&gt; 5457

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5457

Asn Pro Phe Ala Ser Gly Gln Phe Gln Thr Arg Ile Leu Ala Cys Pro  
1 5 10 15

Ala Ser His Gly Met Pro Leu Pro Tyr Cys Gln Cys Asp Leu Ser Glu  
20 25 30

Thr Ala Tyr Leu Ile Leu Ser Phe Pro Gly Ala Ala Ser His Leu Pro  
35 40 45

Gln Asp Leu Asn Phe Lys Leu Tyr Ser Ser Pro His Ser Pro Gln Gln  
50 55 60

&lt;210&gt; 5458

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (55)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4839

&lt;400&gt; 5458

Val Leu Val Ser Leu Pro Val Pro Thr Gln Ile Ala Ser Gln Asn Phe  
 1 5 10 15

Asp Pro Ala Thr Val Ser Val Ala Thr Xaa His Lys Gly Ala Glu Pro  
 20 25 30

Ser Arg Gly Thr Ala Trp Gly Pro Val Ala Lys Arg Leu Gln Gln Glu  
 35 40 45

Leu Met Thr Leu Met Met Xaa Gly Asp Lys Arg Ile Ser Ala Thr Leu  
 50 55 60

Lys Ala Leu Ser Asn Gly His His Ser  
 65 70

&lt;210&gt; 5459

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5459

Pro Lys Val Leu Gly Leu Gln Ala Glu Pro Pro Arg Pro Ala Leu Leu  
 1 5 10 15

Leu Leu Leu Arg Phe Glu Asn Arg Cys Leu Asn Ala Pro Asp Ser Ala  
 20 25 30

Leu Leu Thr Gln Arg Phe Pro His Leu Ile Tyr Ser Val Pro Ala Gln  
 35 40 45

Ser Pro Phe Ser Leu Met Pro Arg Ala Gly Phe Ser Leu Pro Ala Pro  
 50 55 60

Arg Phe Trp Ser Pro Pro Ser Val Leu Gly Pro Ser Cys Pro Leu Ser  
 65 70 75 80

Gly Phe Arg Pro Ser Gln His Ser Leu Ala Ser Leu Pro  
 85 90

&lt;210&gt; 5460

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5460

Gly Arg Pro Phe Gly Asn Leu Cys Leu Asn Ser Asn Arg Arg Glu Asn

## 4840

1                      5                      10                      15  
 Val Gln Ala Met Gly Leu Leu Pro Ile Ser Leu Cys Phe Ala Ile Pro  
                     20                      25                      30  
 Trp Asp Lys Gly Thr Thr Ser Gly Ser Gln Ser Pro Asn Gln Tyr His  
                     35                      40                      45  
 Arg Val  
                     50

<210> 5461  
 <211> 67  
 <212> PRT  
 <213> Homo sapiens

<400> 5461  
 Glu Pro Ser Ser Val His Lys Lys Pro Ile Glu Ser Arg Ser His Phe  
   1                      5                      10                      15  
 Ile Arg Trp Gln Val Ser Trp Ala Ser Leu Leu Ala Ser Pro Lys Arg  
                     20                      25                      30  
 Trp Cys Cys Gln Asp Val Leu Glu Val Ile Met Gly His Thr Glu Ala  
                     35                      40                      45  
 Leu Ser Leu His Arg Leu Lys Cys His Gln Asn Trp Pro Leu Pro Asn  
                     50                      55                      60  
 Ile Pro His  
                     65

<210> 5462  
 <211> 62  
 <212> PRT  
 <213> Homo sapiens

<400> 5462  
 Glu Arg Glu Ile Leu Met Ala Pro Met Ala Ala Arg Ile Thr Ser Leu  
   1                      5                      10                      15  
 Lys Phe Arg Ala Cys Val Asn Arg Phe Cys Phe Leu Val Ser Glu Arg  
                     20                      25                      30  
 Phe Ser Tyr Ser Thr Val Leu Ile Cys Phe Ser Lys Pro Ser Asp Leu  
                     35                      40                      45

## 4841

Cys Ile Phe Asn Arg Pro Gln Asn Asn Val Lys Tyr Met Ala  
 50 55 60

<210> 5463

<211> 60

<212> PRT

<213> Homo sapiens

<400> 5463

Lys Tyr Gln Ile Ile Leu Trp Asn Val Lys Ala Phe Leu Leu Lys Pro  
 1 5 10 15

Ser Ile Cys Phe Ile Val Ile Ser Val Ala Asn Met Asp Phe Ile Phe  
 20 25 30

Lys Met Met Phe Tyr Ile Ile Phe Pro Tyr Lys Leu Phe Glu Lys Gln  
 35 40 45

Phe Asn Asn Ser Met Ile Val Val Ala Pro Leu Asn  
 50 55 60

<210> 5464

<211> 44

<212> PRT

<213> Homo sapiens

<400> 5464

Trp Gln Ser Asn Phe Phe Cys Leu Phe Pro Arg Glu Ser Trp Glu Tyr  
 1 5 10 15

Pro Glu Leu Gly Ala Leu Met Ile Leu Phe Gln Leu Trp Cys Leu Lys  
 20 25 30

Lys Asn Tyr Lys Ser Ile Leu Asn Gly Leu Ser Ser  
 35 40

<210> 5465

<211> 20

<212> PRT

<213> Homo sapiens

<400> 5465

Glu Cys Lys Leu Val Gln Pro Ser Trp Lys Thr Gly Trp Gln Phe Leu  
 1 5 10 15

## 4842

Lys Asp Leu Cys  
20

<210> 5466

<211> 58

<212> PRT

<213> Homo sapiens

<400> 5466

Gln Lys Ile Glu Leu Ser Phe Arg Val Ser Lys Lys Val Leu Tyr Ser  
1 5 10 15

Cys Cys Thr Pro Gly Ser Trp Gln Gly Gly Asp Phe Cys Pro Arg Glu  
20 25 30

Cys Ser Phe Leu Cys Ile Ile Ala Lys Gln Phe Cys Ser Cys Ile Leu  
35 40 45

Lys His His Trp Met Asn Phe Phe Pro Leu  
50 55

<210> 5467

<211> 83

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (7)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (45)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (47)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

## 4843

&lt;221&gt; SITE

&lt;222&gt; (83)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5467

Leu Leu Ile Glu Thr Cys Xaa Val Glu Lys Leu Phe Leu Ser Leu Leu  
 1 5 10 15

Ala Ile Gln Val Ser Ser Phe Met Lys Trp Leu Phe Met Ser Phe Ala  
 20 25 30

His Phe Tyr Ile Xaa Leu Phe Phe Phe Phe Pro Ala Xaa Leu Xaa Glu  
 35 40 45

Leu Tyr Ile Leu Ser Ile Leu Ile Ile Tyr Arg Lys Leu Phe Gly Cys  
 50 55 60

His Tyr Leu Leu Leu Val Asn Val Phe Cys Leu Trp Ile Ser Phe Ile  
 65 70 75 80

Ile Tyr Xaa

&lt;210&gt; 5468

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (21)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5468

Gln Ala Leu Thr Leu Cys Lys Lys Gly Gly Arg Gly His Ser Trp Ala  
 1 5 10 15

Gly Gly Val Gly Xaa Gln Asp Gly Cys Pro Ser Leu Pro Ile Phe Ser  
 20 25 30

Trp Leu Trp Asp Gln Arg Leu Val Leu Gly Ile Trp Thr Trp Arg Pro  
 35 40 45

Arg Ala Ile Gly Glu Gly Leu Lys Pro Val Leu Ser Ala Ala Cys Cys  
 50 55 60

Glu Trp Pro Ser Arg Val Met Thr Glu Leu Phe Trp Gly Arg Arg  
 65 70 75



4844

&lt;210&gt; 5469

&lt;211&gt; 245

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (118)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (170)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (171)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (172)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (173)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (177)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5469

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Gly | Ala | Gly | Ala | Ala | Gly | Ser | Arg | Cys | Val | Ser | Gly | Glu | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Arg | Leu | Gly | Arg | Arg | Arg | Arg | Gln | Arg | Leu | Glu | Glu | Arg | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Arg | Phe | Pro | Cys | Pro | Gly | Pro | Arg | Glu | Gly | Arg | Pro | Thr | Ala | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Gln | Leu | Ser | Asp | Glu | Glu | Ile | Asp | His | Gly | Ala | Glu | Glu | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asp | Lys | Glu | Asp | Gln | Asp | Leu | Asp | Lys | Met | Phe | Gly | Ala | Trp | Leu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4845

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Gly | Glu | Leu | Asp | Lys | Leu | Thr | Gln | Ser | Leu | Asp | Ser | Asp | Lys | Pro | Met |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Glu | Pro | Val | Lys | Arg | Ser | Pro | Leu | Arg | Gln | Glu | Thr | Asn | Met | Ala | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Ser | Tyr | Arg | Phe | Xaa | Ile | Tyr | Asn | Leu | Asn | Glu | Ala | Leu | Asn | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | Glu | Thr | Val | Asp | Leu | Asp | Ala | Leu | Met | Ala | Asp | Leu | Cys | Ser | Ile |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Gln | Glu | Leu | Ser | Ser | Ile | Gly | Ser | Gly | Asn | Ser | Lys | Arg | Gln | Ile |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Thr | Glu | Thr | Lys | Ala | Thr | Gln | Lys | Leu | Xaa | Xaa | Xaa | Xaa | His | Thr | Leu |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Xaa | His | Gly | Thr | Leu | Lys | Gly | Leu | Ser | Ser | Ser | Ser | Asn | Arg | Ile | Ala |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Lys | Pro | Ser | His | Ala | Ser | Tyr | Ser | Leu | Asp | Asp | Val | Thr | Ala | Gln | Leu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Glu | Gln | Ala | Ser | Leu | Ser | Met | Asp | Glu | Ala | Ala | Gln | Gln | Ser | Val | Leu |
|     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Glu | Asp | Thr | Lys | Pro | Leu | Val | Thr | Asn | Gln | His | Arg | Arg | Thr | Ala | Val |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Ser | Arg | His | Ser | Glu |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 245 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 5470

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5470

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Phe | Val | Asp | Cys | Glu | His | Pro | Ser | Tyr | Ile | Gly | Leu | Tyr | Arg | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Ser | Lys | Asn | Tyr | Ser | Cys | Ile | Thr | Val | Val | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |

## 4846

&lt;210&gt; 5471

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5471

Ala Phe Pro Leu Pro Ser Pro Gly Leu Thr Pro His Pro Ile Pro Gln  
 1 5 10 15

Lys Val Arg Arg Ala Gly Cys Val Asp Gly Ile Pro Glu Asn Glu Pro  
 20 25 30

Val Glu Ser Ile Trp Pro Trp His Val Asn Ser Ser Leu Phe Pro Ala  
 35 40 45

Val Ile Thr Thr Leu Phe Phe Pro Gln Gly Leu Asn Cys Thr Val Lys  
 50 55 60

Asn Ser Lys Ser Ser Phe Ser Val Leu Leu Leu Val Ala Phe Leu Ile  
 65 70 75 80

Lys

&lt;210&gt; 5472

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5472

Ser Cys Ser Phe Gly Val Cys Glu Gln Thr Gln Asp Ile Ile Ile Lys  
 1 5 10 15

His His Pro Ser Ile Lys Gly Leu Phe Tyr Asn Met Cys Cys Glu Ile  
 20 25 30

Asn Leu Ser Gly Lys Val Trp Cys Asn Glu Leu Phe His Ser Met Val  
 35 40 45

Ile Asp Ala Val Lys  
 50

&lt;210&gt; 5473

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4847

&lt;400&gt; 5473

Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro Gly Ser Thr His Ala Ser  
 1 5 10 15

Val Phe Phe Phe Phe Phe Phe Phe Phe Phe Phe Cys Phe Phe Phe  
 20 25 30

Phe Phe Phe Val Val His Asn His Leu Phe Tyr Leu Lys Thr Cys Leu  
 35 40 45

His Cys Ile Glu His Gln His Arg Cys Asp Gln Glu Thr His Ser Pro  
 50 55 60

Val Pro Ala Ala Leu Gly Pro Val Tyr Asp Leu Gly Trp Thr Val Ile  
 65 70 75 80

Phe His Ser Glu Gly Gly Lys Asp Arg Lys Glu Lys Met Ala Ile Ile  
 85 90 95

Pro Thr Pro Val Gln Glu Ser Glu Gln  
 100 105

&lt;210&gt; 5474

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (51)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5474

Gly Phe Ile Ile His Cys Gln Met Leu Val Pro Ile Lys Gln Cys Cys

## 4848

1                      5                      10                      15  
 Leu Pro Thr Pro Thr Phe Cys Val Xaa Gly Lys Phe Trp Lys Ser Arg  
                             20                      25                      30  
 Gly Xaa His Ala Lys Arg Leu Ser Thr Gly Leu Phe Leu Val Ser Ala  
                             35                      40                      45  
 Leu Xaa Xaa Leu Cys Glu Glu Val Ala Ile Tyr Gly Phe Trp Pro Phe  
                             50                      55                      60  
 Ser Val Asn Met His Glu Gln Pro Ile Ser His His Tyr Tyr Asp Asn  
                             65                      70                      75                      80  
 Val Leu Pro Phe Ser Gly Phe His Ala Met Pro Glu Glu Phe Leu Gln  
                             85                      90                      95  
 Leu Trp Tyr Leu His Lys Ile Gly Ala Leu Arg Met Gln Leu Asp Pro  
                             100                      105                      110  
 Cys Glu Asp Thr Ser Leu Gln Pro Thr Ser  
                             115                      120

&lt;210&gt; 5475

&lt;211&gt; 237

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (109)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (237)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5475

Tyr Gln Ser Ile Ala Leu Tyr Phe Glu Gly Glu Lys Arg Tyr Leu Gln  
                             1                      5                      10                      15  
 Ala Gly Lys Phe Phe Leu Leu Cys Gly Gln Tyr Ser Arg Ala Leu Lys  
                             20                      25                      30  
 His Phe Leu Lys Cys Pro Ser Ser Glu Asp Asn Val Ala Ile Glu Met  
                             35                      40                      45  
 Ala Ile Glu Thr Val Gly Gln Ala Lys Asp Glu Leu Leu Thr Asn Gln

## 4849

50                                      55                                      60  
 Leu Ile Asp His Leu Leu Gly Glu Asn Asp Gly Met Pro Lys Asp Ala  
 65                                      70                                      75                                      80  
 Lys Tyr Leu Phe Arg Leu Tyr Met Ala Leu Lys Gln Tyr Arg Glu Ala  
                                     85                                      90                                      95  
 Ala Gln Thr Ala Ile Ile Ile Ala Arg Glu Glu Gln Xaa Ala Gly Asn  
                                     100                                      105                                      110  
 Tyr Arg Asn Ala His Asp Val Leu Phe Ser Met Tyr Ala Glu Leu Lys  
                                     115                                      120                                      125  
 Ser Gln Lys Ile Lys Ile Pro Ser Glu Met Ala Thr Asn Leu Met Ile  
                                     130                                      135                                      140  
 Leu His Ser Tyr Ile Leu Val Lys Ile His Val Lys Asn Gly Asp His  
 145                                      150                                      155                                      160  
 Met Lys Gly Ala Arg Met Leu Ile Arg Val Ala Asn Asn Ile Ser Lys  
                                     165                                      170                                      175  
 Phe Pro Ser His Ile Val Pro Ile Leu Thr Ser Thr Val Ile Glu Cys  
                                     180                                      185                                      190  
 His Arg Ala Gly Leu Lys Asn Ser Ala Phe Ser Phe Ala Ala Met Leu  
                                     195                                      200                                      205  
 Met Arg Pro Glu Tyr Arg Ser Lys Ile Asp Ala Lys Tyr Lys Lys Lys  
                                     210                                      215                                      220  
 Ile Glu Gly Met Val Gln Glu Thr Arg Tyr Ile Leu Xaa  
 225                                      230                                      235

&lt;210&gt; 5476

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5476

Gly Gly Ala Gly Ala Arg Gly Gly Gly Ala Leu Trp Val Thr Glu Gly  
 1                                      5                                      10                                      15

## 4850

Val Lys Xaa Pro Gly Pro Val Ser Gly Gln Cys Arg Lys Ser Gln Pro  
                   20                  25                  30

His Ala Cys Gly Glu Ile Pro Cys Arg Ala Pro Pro Thr Met Asp Thr  
           35                  40                  45

Ser Gly Pro Leu Arg Ser Ser Lys Ala Val Ser Ser Phe Pro Leu Gln  
       50                  55                  60

Gln Arg Gly Val Pro Ser Ser Val Lys Gln Pro Phe Leu Phe Leu Glu  
   65                  70                  75                  80

Ser Tyr Lys Trp Arg Pro Lys Ser Val Pro Met Leu Arg Gln Gly Pro  
                   85                  90                  95

Gly Cys Ser Phe Leu Ser Gly Asn Arg Leu Glu Leu Phe Leu Trp Asp  
           100                  105                  110

Met Pro Pro Arg Pro Ala Leu Lys Gly Cys Ser Ser Leu Thr Thr Trp  
           115                  120                  125

Asn Gln Thr Pro Pro Ser Phe Val Tyr Lys Gly Asn Lys Glu  
       130                  135                  140

<210> 5477

<211> 41

<212> PRT

<213> Homo sapiens

<400> 5477

Gly Arg Lys Leu Pro Glu Glu Glu Gly Gly Lys Glu Ile Lys Asn Thr  
   1                  5                  10                  15

Leu Lys Val Cys Gln Lys Lys Glu Leu Tyr Phe Leu Lys His Ser Arg  
           20                  25                  30

Lys Met Met Ser Phe Gln Leu Leu Ile  
       35                  40

<210> 5478

<211> 64

<212> PRT

<213> Homo sapiens

<400> 5478

Lys Ser Ile Val Val Leu Val Leu Leu Ser Trp Ile Ile Val Gln Lys  
   1                  5                  10                  15

## 4851

Glu Val Gln Pro Pro Asp Asn His Ile Phe Thr Val Met Asn Gly Lys  
                   20                  25                  30

Thr Lys Cys Arg Ala Gln Leu Thr Gln Arg Lys Lys Gly Ser Lys Asp  
           35                  40                  45

Lys Leu Trp His Asn Leu Ala Ala Lys Phe Leu Pro Ser Thr Asp Phe  
       50                  55                  60

&lt;210&gt; 5479

&lt;211&gt; 48

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5479

Cys Ile Ile Leu Arg Gly Phe Phe Arg Ala Val Leu Thr Glu Leu Ser  
   1                  5                  10                  15

Ile Asn Leu His Ser Ser Gly Arg Leu Leu Lys Leu Ala Gly His Asn  
           20                  25                  30

Glu Ile Gly Lys Ser Arg Val Leu Lys Ser Ile Ala Trp Pro Ser Ala  
       35                  40                  45

&lt;210&gt; 5480

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5480

Lys Leu Leu Cys Pro His Leu Arg Glu Glu Gly Ser Ser Asn Asn Thr  
   1                  5                  10                  15

Thr Met Cys Lys Ala Gly Ser Glu Ile Leu Leu Ser Pro Leu Pro Ser  
           20                  25                  30

Cys Asn Pro Ser Leu Pro His Leu Ser Cys Met Cys Ile Thr Met Leu  
       35                  40                  45

Phe Cys Phe Leu Met Lys Met Arg Leu Cys Ile Leu Phe Asp Asn Leu



## 4852

50

55

60

Phe Gln Ile Lys

65

&lt;210&gt; 5481

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5481

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Ser | Thr | Pro | His | Pro | Leu | Arg | Arg | Gly | Pro | Arg | Ser | Tyr | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Val | His | Leu | Pro | Arg | Gly | Cys | Ser | Glu | Leu | Ala | Met | Ala | Ala | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Thr | Ala | Ala | Asp | Pro | Arg | Ser | Gly | Ser | Leu | Arg | Arg | Gly | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Leu | Pro | Arg | Pro | Pro | Arg | Gln | Pro | Glu | Gln | Leu | Gln | Ser | Thr |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Gly | Ser | Glu | Thr | Phe | Lys | Val | Lys | Gln | Ala | Glu | Trp | Gly | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Ile | Ser | Pro | Pro | Pro | Gly | Ala | Pro | Gly | Leu | Ser | Leu | Gly | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Pro | Pro | Leu | Ala | Pro |
|     |     |     |     | 100 |

&lt;210&gt; 5482

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5482

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ile | His | Glu | Lys | Tyr | Glu | Ile | Trp | Phe | His | Pro | Val | Arg | His | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Arg | Glu | Asp | Gln | Asn | Val | Thr | Trp | Gln | Leu | Gly | Asn | Asn | Leu | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Ala | Val | Gly | Leu | Asn | Phe | Leu | Ile | Ile | Asp | Pro | Gly | Ile | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

## 4853

Gln Pro Glu Thr Gln Leu Ser Gly Arg Gln Thr Asn Cys Thr Thr Pro  
 50 55 60

Thr Ile Ser Trp Thr Leu Lys Phe Cys Leu Leu Gln Ser Ile Val Ser  
 65 70 75 80

Phe Lys Ala Pro Val Leu Ala  
 85

&lt;210&gt; 5483

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5483

Thr Pro Ile Met Xaa Asp Glu Phe Val Met Arg Asp Asn Leu Glu Val  
 1 5 10 15

Val Phe Thr His Tyr Ala Thr Ile Lys Gly Ser Thr Val Glu Arg Ile  
 20 25 30

Leu Thr His Ser Val Thr Asn Gly Thr His Arg Gln His Glu Phe Ala  
 35 40 45

Pro Tyr Met Thr Glu Val Ile Gln Gly Phe Leu  
 50 55

&lt;210&gt; 5484

&lt;211&gt; 240

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5484

Val Thr Thr Lys Phe Val Arg Thr Ser Thr Asn Lys Val Lys Cys Pro  
 1 5 10 15

Val Phe Val Val Arg His Ser Met Glu Asn Leu Phe Glu Lys Asn Lys  
 20 25 30

Ile Arg Ala Ser Ile Ser Tyr Lys Trp Thr Pro Glu Gly Arg Arg Leu  
 35 40 45

## 4854

Val Thr Gly Ala Ser Ser Gly Glu Phe Thr Leu Trp Asn Gly Leu Thr  
 50 55 60  
 Phe Asn Phe Glu Thr Ile Leu Gln Ala His Asp Ser Pro Val Arg Ala  
 65 70 75 80  
 Met Thr Trp Ser His Asn Asp Met Trp Met Leu Thr Ala Asp His Gly  
 85 90 95  
 Gly Tyr Val Lys Tyr Trp Gln Ser Asn Met Asn Asn Val Lys Met Phe  
 100 105 110  
 Gln Ala His Lys Glu Ala Ile Arg Glu Ala Arg Phe Ile His Asn Ile  
 115 120 125  
 Pro Phe Ser Val Val Pro Ile Val Met Val Lys Leu Phe Ser Lys Cys  
 130 135 140  
 Ile Leu Gly Ala Glu Met His Gly Leu Cys Gln Phe Leu Gly Asn Phe  
 145 150 155 160  
 Leu His Pro Ile Asn Thr Ile Phe Phe Phe Val Phe Thr His Ser Pro  
 165 170 175  
 Phe Cys Trp His Leu Ser Glu Val Val Leu Ser Arg Tyr Gln Pro Leu  
 180 185 190  
 Gln Tyr Val Arg Asp Val Leu Ser Ala Ala Phe Cys Thr Gly Phe Leu  
 195 200 205  
 Phe Ser Phe Met Ile Asn Asn Val Tyr Thr Leu Phe Leu Phe Ile Ile  
 210 215 220  
 Tyr Cys Val Arg Gln Glu Tyr Phe Ile Pro Asn Lys Glu Phe Ser Leu  
 225 230 235 240

&lt;210&gt; 5485

&lt;211&gt; 47

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5485

Asn Glu Ala Phe Ile Tyr Val Phe Arg Cys His Cys Ser Leu Ser Glu  
 1 5 10 15

Leu Ala Val His Ile Ser Leu Pro Leu Val Leu Ser Thr Asp Phe Phe

## 4855

20 25 30  
 Leu Lys Lys Arg Gly Thr Val Tyr His Ser Ser Thr Val Leu Leu  
 35 40 45  
  
 <210> 5486  
 <211> 72  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5486  
 Tyr Glu Ala Lys Thr Lys Ser Trp Lys Ser Glu Gln Val Gln Trp Phe  
 1 5 10 15  
 Gly Arg Gly Asn Glu Glu Gln Arg Arg Cys Gln Pro Leu Leu Gln Thr  
 20 25 30  
 Leu Trp Tyr His Trp Phe Gly Arg Lys Asn Asn His His Leu Arg Gly  
 35 40 45  
 Pro Val Gly Lys Pro Cys Pro His Gly Lys Ala Ile Phe Phe Arg Leu  
 50 55 60  
 His Phe Ser Trp Tyr Tyr Val Tyr  
 65 70  
  
 <210> 5487  
 <211> 75  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5487  
 Leu Thr Cys Tyr Val Thr Val Ile Tyr Leu Ser Ile Ser Asn Pro Lys  
 1 5 10 15  
 Ala Cys Gln Lys Ala Phe Phe Arg Glu Asn His Phe Thr Phe Val Val  
 20 25 30  
 Lys Leu Leu Ile Ala Thr Leu Lys Asn Ile His Val Cys Ile His Arg  
 35 40 45  
 Asn Ile Phe Ser Gln Tyr Leu Tyr Asp Ser Leu Thr Val Ile Val Leu  
 50 55 60  
 Ser Glu Leu Leu Cys Ala Ser Asp Lys Asn Lys  
 65 70 75

## 4856

&lt;210&gt; 5488

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (68)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (102)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (108)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5488

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Arg | Arg | Thr | Leu | Ala | Ala | Leu | Pro | Leu | Ser | Arg | Val | Ser | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Gly | Ser | Ala | Ser | Pro | Gly | Gln | Leu | Arg | Glu | Ser | Leu | Ala | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Ala | Ser | Thr | Leu | Phe | Leu | Ala | Ala | Lys | Val | Thr | Val | Pro | Phe |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Ala | Leu | Ser | Asp | Pro | Pro | Arg | Ile | Pro | Arg | His | Arg | Glu | Thr |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Gly | Xaa | Gly | Ser | Gly | Gly | Gly | Pro | Gly | Arg | Ile | Ala | Leu | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Leu | Arg | Gly | Pro | Ala | Pro | Ala | Thr | Ala | Leu | Thr | Ser | Glu | Arg |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Arg | Asn | Trp | Gly | Glu | Xaa | Phe | Lys | Ser | Leu | Arg | Xaa | Arg | Cys |  |  |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |  |  |

&lt;210&gt; 5489

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4857

<220>  
 <221> SITE  
 <222> (41)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (47)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (74)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5489  
 Ser Gly Arg Gly Ser Pro Gln Trp Thr Arg Leu Pro His Pro Ala Glu  
           1                  5                  10                  15  
 Val Gly Gly Gly His Glu Glu Met Gly Cys Arg Leu Leu Ser Glu Leu  
                   20                  25                  30  
 Pro Ser Thr Asn Gly Val Gly Val Xaa Asp Leu Pro Arg His Xaa Phe  
           35                  40                  45  
 Phe Thr Phe Gly Lys Met Glu Gly Asp Gly Gly Gly Ile Pro Cys Ser  
           50                  55                  60  
 Leu Cys Cys Ala Asp Thr Leu Glu Lys Xaa Leu Pro Ser Val Glu Gln  
           65                  70                  75                  80  
 Asn Pro Leu Trp Arg Asn Ala Ala Val Leu Asp Leu Glu Ala Glu Gly  
                   85                  90                  95  
 Val Ser Ile Leu Gly Ile Cys Leu Pro Leu Pro Ile Trp Met Pro His  
                   100                  105                  110  
 Leu Ala Val Ser Leu Met Val Ile Leu Phe  
           115                  120

<210> 5490  
 <211> 97  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (6)  
 <223> Xaa equals any of the naturally occurring L-amino acids

4858

&lt;400&gt; 5490

Arg Leu Phe Ser Leu Xaa Gly Glu Cys His Lys Leu Leu Phe Cys Ile  
 1 5 10 15

Ser Thr Ala Cys Gln Ala Leu Ser Ala Ser Ser Asn Leu Ala Leu Thr  
 20 25 30

Ala Thr Gly Ser Arg Cys Pro Ile Phe Gln Ser Lys Asp Arg Gly Val  
 35 40 45

Lys Phe Lys Tyr Arg Phe Ser Asp Ile Asn Leu Cys Asp Asp Leu Ile  
 50 55 60

Glu Ala Gly Phe Ser Ser Ile Thr Val Leu Val Pro Ser Leu Leu Tyr  
 65 70 75 80

Gly Asn Glu Asn Lys Glu Thr Tyr Phe Leu Ala Cys Leu Lys Lys Lys  
 85 90 95

Lys

&lt;210&gt; 5491

&lt;211&gt; 294

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5491

Thr Tyr Thr Ile His Ala Asp Gly Thr Gly Ser Asn Met Asn Ile Asn  
 1 5 10 15

Asp Gly Gly Arg Arg Arg Phe Glu Asp Asn Glu His Thr Leu Arg Ile  
 20 25 30

Tyr Pro Gly Ala Ile Ser Glu Gly Thr Ile Tyr Cys Pro Ile Pro Ala  
 35 40 45

Arg Lys Asn Ser Thr Ala Ala Glu Val Ile Glu Ser Leu Ile Asn Lys  
 50 55 60

Leu His Leu Asp Lys Thr Lys Cys Tyr Val Leu Ala Glu Val Lys Glu  
 65 70 75 80

Phe Gly Gly Glu Glu Trp Ile Leu Asn Pro Thr Asp Cys Pro Val Gln  
 85 90 95

Arg Met Met Leu Trp Pro Arg Met Ala Leu Glu Asn Arg Leu Ser Gly  
 100 105 110

## 4859

Glu Asp Tyr Arg Phe Leu Leu Arg Glu Lys Asn Leu Asp Gly Ser Ile  
 115 120 125

His Tyr Gly Ser Leu Gln Ser Trp Leu Arg Val Thr Glu Glu Arg Arg  
 130 135 140

Arg Met Met Glu Arg Gly Phe Leu Pro Gln Pro Gln Gln Lys Asp Phe  
 145 150 155 160

Asp Asp Leu Cys Ser Leu Pro Asp Leu Asn Glu Lys Thr Leu Leu Glu  
 165 170 175

Asn Leu Arg Asn Arg Phe Lys His Glu Lys Ile Tyr Thr Tyr Val Gly  
 180 185 190

Ser Ile Leu Ile Val Ile Asn Pro Phe Lys Phe Leu Pro Ile Tyr Asn  
 195 200 205

Pro Lys Tyr Val Lys Met Tyr Asp Asn His Gln Leu Gly Lys Leu Glu  
 210 215 220

Pro His Ile Tyr Ala Val Ala Asp Val Ala Tyr His Ala Met Leu Gln  
 225 230 235 240

Arg Lys Lys Asn Gln Cys Ile Val Ile Ser Gly Glu Ser Gly Ser Gly  
 245 250 255

Lys Thr Gln Ser Thr Asn Phe Leu Ile His His Leu Thr Ala Leu Ser  
 260 265 270

Gln Lys Gly Phe Ala Ser Gly Val Glu Gln Ile Ile Leu Gly Ala Gly  
 275 280 285

Pro Val Leu Glu Ala Val  
 290

<210> 5492

<211> 85

<212> PRT

<213> Homo sapiens

<400> 5492

Pro Tyr Leu Arg Arg Arg Asp Thr Gln Asp Lys Leu Gln Val Val Ser  
 1 5 10 15

Arg Phe Thr Phe Tyr Phe Glu Asp Pro Leu Leu Pro Gln Val Pro Asp  
 20 25 30



## 4860

Leu Glu Asn Glu Pro Pro Leu Ser Gly Leu Ala Ser Pro Gln Pro Arg  
35 40 45

His Arg Leu Ala Gln Gly Ser Ser Ser Trp Leu Ser Trp Asn Leu His  
50 55 60

Phe Leu Thr Thr Arg Lys Arg Ser Pro Glu Leu Thr Lys Asn Asn Ile  
65 70 75 80

Leu Leu Thr Trp Glu  
85

<210> 5493  
<211> 274  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (51)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (127)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (130)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (135)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (188)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (231)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE

## 4861

&lt;222&gt; (245)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (271)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5493

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Tyr | Arg | Glu | Ser | Trp | Tyr | Ala | Cys | Arg | Tyr | Arg | Ser | Gly | Ile | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Thr | His | Ala | Ser | Gly | Pro | Thr | Ser | Pro | Pro | Ala | Arg | Met | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Gly | Pro | Ala | Ser | Ala | Leu | Ser | Thr | Ser | Ala | Glu | Pro | Leu | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Xaa | Phe | Arg | Lys | Phe | Leu | Leu | Met | Leu | Cys | Ser | Leu | Leu | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Tyr | Val | Phe | Tyr | Cys | Leu | Ala | Glu | Arg | Cys | Gln | Thr | Leu | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Val | Val | Gly | Leu | Ser | Gly | Gly | Gly | Glu | Glu | Ala | Gly | Ala | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Val | Leu | Ala | Gly | Pro | Arg | Glu | Leu | Ala | Val | Trp | Pro | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Gln | Arg | Lys | Arg | Leu | Leu | Gln | Leu | Pro | Gln | Trp | Arg | Xaa | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Xaa | Pro | Ala | Pro | Arg | Xaa | Asp | Gly | Glu | Glu | Ala | Ala | Trp | Glu | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Pro | Gly | Leu | Ser | Gly | Val | Arg | Ala | Ala | Pro | Gly | Pro | Glu | Ala |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Trp | Pro | Arg | Pro | Arg | Arg | Gly | Pro | Trp | Arg | Cys | Ser | Trp | Thr | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Ser | Ser | Cys | Arg | Ser | Ile | Ile | Ile | Gly | Xaa | Lys | Lys | Gly | Gly |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Ala | Leu | Leu | Glu | Phe | Leu | Arg | Val | His | Pro | Asp | Val | Arg | Ala |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Ala | Glu | Pro | His | Phe | Phe | Asp | Arg | Ser | Tyr | Asp | Lys | Gly | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

## 4862

Ala Trp Tyr Arg Asp Leu Xaa Pro Arg Thr Leu Glu Gly Gln Ile Thr  
 225 230 235 240

Met Glu Lys Lys Xaa Ser Tyr Ser Ser Ser Gly Lys Pro Pro Arg Ala  
 245 250 255

Ser Trp Ala Cys Ser Lys Asp Asn Lys Leu Ile Arg Trp Leu Xaa Gly  
 260 265 270

Asn Arg

<210> 5494

<211> 66

<212> PRT

<213> Homo sapiens

<400> 5494

Gly Val Gly His Ser Glu Leu Thr Ser Met Phe Asn Thr Ile Thr Arg  
 1 5 10 15

Asp Thr Glu Thr Ala Asn Gln Asp Lys Lys Leu Thr Thr Ser Arg Cys  
 20 25 30

Arg Gln Leu Phe Pro Arg Cys Gln Asn Lys Thr Ser Tyr His Asp Glu  
 35 40 45

Ala Pro Thr Pro Leu Asn Leu Pro Ser Ser Cys Leu Pro Leu Ser Leu  
 50 55 60

Ala Gly  
 65

<210> 5495

<211> 117

<212> PRT

<213> Homo sapiens

<400> 5495

Leu Asp Arg Ile Phe Ser Gly Gly Ser Leu Val Asp Phe Glu Gly Lys  
 1 5 10 15

Thr Phe Trp Val Tyr His Val Leu Ile Leu Glu Thr Gly Ser Asp Glu  
 20 25 30

Ser Ser Pro Val Val Pro Leu Ser Asn Ser Ile Lys Val Gly Ile Ser  
 35 40 45

## 4863

Lys Glu His Leu Ile Gln Gly Ala Gly Ala Asp Phe Ile Asp Ser Arg  
 50 55 60  
 Glu Thr Cys Phe Ser Ala Tyr Ser Ser Leu Pro Ser Gly Ala Ser Leu  
 65 70 75 80  
 Leu Thr Ile Thr Ala Ser Leu Arg Cys Arg Trp Val Phe Leu Lys Gln  
 85 90 95  
 Glu Thr Val Ser Pro Leu Leu Pro Gln Leu Leu Gly Val Gly Ile Ser  
 100 105 110  
 Asp Thr Gly Asp Gly  
 115

&lt;210&gt; 5496

&lt;211&gt; 171

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5496

Ile Thr Met Asp Trp Gln Ser Ile Lys Ile Gln Glu Leu Met Ser Asp  
 1 5 10 15  
 Asp Gln Arg Glu Ala Gly Arg Ile Pro Arg Thr Ile Glu Cys Glu Leu  
 20 25 30  
 Val His Asp Leu Val Asp Ser Cys Val Pro Gly Asp Thr Val Thr Ile  
 35 40 45  
 Thr Gly Ile Val Lys Val Ser Asn Ala Glu Glu Gly Ser Arg Asn Lys  
 50 55 60  
 Asn Asp Lys Cys Met Phe Leu Leu Tyr Ile Glu Ala Asn Ser Ile Ser  
 65 70 75 80  
 Asn Ser Lys Gly Gln Lys Thr Lys Ser Ser Glu Asp Gly Cys Lys His  
 85 90 95  
 Gly Met Leu Met Glu Phe Ser Leu Lys Asp Leu Tyr Ala Ile Gln Glu  
 100 105 110  
 Ile Gln Ala Glu Glu Asn Leu Phe Lys Leu Ile Val Asn Ser Leu Cys  
 115 120 125  
 Pro Val Ile Phe Gly His Glu Leu Val Lys Ala Gly Leu Ala Leu Ala  
 130 135 140

## 4864

Leu Phe Gly Gly Ser Gln Lys Tyr Ala Asp Asp Lys Asn Arg Ile Pro  
145 150 155 160

Ile Arg Gly Asp Pro His Ile Leu Val Gly Phe  
165 170

<210> 5497

<211> 24

<212> PRT

<213> Homo sapiens

<400> 5497

Ser Val Lys Cys Arg Leu Ser Ser Phe Ile Met Asn Val Ile Val Arg  
1 5 10 15

Asn Thr Leu Thr Phe Ser Asn Phe  
20

<210> 5498

<211> 74

<212> PRT

<213> Homo sapiens

<400> 5498

Gly Phe Ser Gln Arg Arg Val Cys Ser Gly Arg Cys Cys Gly Gln Gly  
1 5 10 15

Ser Arg Gln Arg Pro Leu Ser Ser Arg Leu Ala Pro Ala Leu Arg Gly  
20 25 30

His Gly Gly Ala Glu Ala Thr Arg Ala Gly Pro Glu Pro Gly Gly Pro  
35 40 45

Trp Leu Arg Phe Ser Cys Thr Glu Lys Leu Asn Pro Ala Arg Ser Asp  
50 55 60

Val His Phe Met Val Pro Thr Pro Leu Gly  
65 70

<210> 5499

<211> 153

<212> PRT

<213> Homo sapiens

<220>

## 4865

<221> SITE  
 <222> (123)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (132)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (134)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (141)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5499  
 Thr Cys Tyr Ala Thr Pro Cys Leu Val Trp Met Gly Arg Trp Pro Pro  
 1 5 10 15

Ala Val Thr Leu Thr Cys Arg Pro Thr Ala Thr Val Pro Trp Ser Pro  
 20 25 30

Gly Thr Thr Ser Ala Glu Thr Thr Ala Leu Ala Arg Ser Leu Cys Ser  
 35 40 45

Ala Gly Thr Gln Pro Ala Pro Ser Thr Thr Ser Leu Pro Ser Trp Arg  
 50 55 60

Ser Ala Ala Pro Leu Ala Trp Pro Leu Gln Leu Ser Gly Gln Trp Trp  
 65 70 75 80

Ser Ala Gly Ala Cys Phe Leu Asp Leu Pro Ser Leu Ala Leu Cys Trp  
 85 90 95

Pro Gly Asp Ser Gly Asp Ala Ser Gly Gln Lys Pro Gly Ala Glu Gln  
 100 105 110

Thr Leu Gly Cys Ser Gly Trp Ala Gln Ala Xaa Phe Arg Leu Ala Ala  
 115 120 125

Thr Val Arg Xaa Pro Xaa Arg Pro Gln Ala Pro Ser Xaa Arg Ala Phe  
 130 135 140

Leu Pro Leu His Phe Pro Thr Ile Glu  
 145 150

## 4866

&lt;210&gt; 5500

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5500

Trp Thr Trp Ser Thr Pro Ala Ser Ala Arg Ser Ser Gly Thr Thr Thr  
 1 5 10 15

Trp Pro Pro Ala Pro Ala Ala Ala Leu His Leu Arg Leu Arg Gly Val  
 20 25 30

Gln Arg Arg Arg Ile Leu Thr Met Glu Pro Val Leu Gly Gly Thr Pro  
 35 40 45

Tyr Leu Asp Lys Phe Val Val Ser Ser Ser Arg Gln Gly Gln Gly Ser  
 50 55 60

Gly Gln Met Leu Trp Glu Cys Leu Arg Arg Asp Leu Gln Thr Leu Phe  
 65 70 75 80

Trp Arg Ser Arg Val Thr Asn Pro Ile Asn Pro Trp Tyr Phe Lys His  
 85 90 95

Ser Asp Gly Ser Phe Ser Asn Lys Gln Trp Ile Phe Phe Trp Phe Gly  
 100 105 110

Leu Ala Asp Ile Arg Asp Ser Tyr Glu Leu Val Asn His Ala Lys Gly  
 115 120 125

Leu Pro Asp Ser Phe His Lys Pro Ala Ser Asp Pro Gly Ser  
 130 135 140

&lt;210&gt; 5501

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (23)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4867

&lt;400&gt; 5501

Gln Arg Glu Asn Arg Pro Cys Leu Lys Glu Arg Phe Leu Val Tyr Ala  
 1 5 10 15  
 Ser Gly Leu Trp Ala Gly Xaa Ala Thr Ile Pro Tyr Xaa Arg Gln Ser  
 20 25 30  
 Ser Ala Pro Ala Ala Lys Leu Ala Cys Phe Thr Gly Lys Leu Leu Glu  
 35 40 45  
 Glu Trp Leu Leu Met Arg Phe Gln Asn Glu Val Leu Ala Asn Thr Ala  
 50 55 60  
 His Gly His Pro Gly Phe Ser Gln Trp Leu Pro Phe Leu Leu Ala Ser  
 65 70 75 80  
 Leu Asn Arg Gly Glu Ser Leu Thr Ser Leu Leu Leu Ser Lys Pro Phe  
 85 90 95  
 Thr Leu Asn Gly  
 100

&lt;210&gt; 5502

&lt;211&gt; 165

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5502

Lys Trp Asp Glu Pro Trp Tyr Asn Gln Lys Thr Glu His Gln Arg Asn  
 1 5 10 15  
 Ser Ser Lys Ile Leu Arg Phe Ile Ser Asp Phe Leu Ala Phe Leu Val  
 20 25 30  
 Leu Tyr Asn Phe Ile Ile Pro Ile Ser Leu Tyr Val Thr Val Glu Met  
 35 40 45  
 Gln Lys Phe Leu Gly Ser Phe Phe Ile Gly Trp Asp Leu Asp Leu Tyr  
 50 55 60  
 His Glu Glu Ser Asp Gln Lys Ala Gln Val Asn Thr Ser Asp Leu Asn  
 65 70 75 80  
 Glu Glu Leu Gly Gln Val Glu Tyr Val Phe Thr Asp Lys Thr Gly Thr  
 85 90 95  
 Leu Thr Glu Asn Glu Met Gln Phe Arg Glu Cys Ser Ile Asn Gly Met  
 100 105 110



## 4868

Lys Tyr Gln Glu Ile Asn Gly Arg Leu Val Pro Glu Asp Gln His Gln  
           115                          120                          125  
 Thr Leu Gln Lys Glu Thr Tyr Leu Ile Leu Val Val Tyr Pro Ile Leu  
           130                          135                          140  
 Thr Thr Tyr Pro Ile Leu Gln Pro Val Pro Leu Ser Glu Pro Val Leu  
 145                          150                          155                          160  
 Lys Met Lys Leu Asn  
                           165

<210> 5503  
 <211> 54  
 <212> PRT  
 <213> Homo sapiens

<400> 5503  
 Arg Leu Pro Ser Glu Val Ser Asp His Ser Leu Leu Leu Lys Gln Leu  
   1                          5                          10                          15  
 Leu Leu Phe Leu Tyr Ser Ile Glu His Pro Gly Ile Asp Ile Ile Leu  
           20                          25                          30  
 Ser Ile Ser Ile Ser Pro Leu Leu Val Tyr Leu Ile Ile Asn Pro Val  
           35                          40                          45  
 Ser Arg Ala Val Phe Ile  
       50

<210> 5504  
 <211> 220  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (57)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (175)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE

## 4869

&lt;222&gt; (178)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5504

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Glu | Gly | Lys | Cys | Phe | Cys | Arg | Lys | Ser | Thr | Leu | Thr | Thr | His | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Thr | His | Thr | Gly | Glu | Lys | Pro | Tyr | Glu | Cys | Asn | Glu | Cys | Gly | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Phe | Ser | Arg | Leu | Ser | Tyr | Leu | Thr | Val | His | Tyr | Arg | Thr | His | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Glu | Lys | Pro | Tyr | Glu | Cys | Asn | Xaa | Cys | Gly | Lys | Thr | Phe | Tyr | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asn | Ser | Ala | Leu | Met | Arg | His | Gln | Arg | Val | His | Thr | Gly | Glu | Lys | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Tyr | Glu | Cys | Asn | Glu | Cys | Gly | Lys | Leu | Phe | Ser | Gln | Leu | Ser | Tyr | Leu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Thr | Ile | His | His | Arg | Thr | His | Ser | Gly | Val | Lys | Pro | Tyr | Glu | Cys | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Glu | Cys | Gly | Lys | Thr | Phe | Tyr | Gln | Asn | Ser | Ala | Leu | Cys | Arg | His | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Ile | His | Lys | Gly | Glu | Lys | Pro | Tyr | Glu | Cys | Tyr | Ile | Cys | Gly | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Phe | Phe | Ser | Gln | Met | Ser | Tyr | Leu | Thr | Ile | His | His | Arg | Ile | His | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Gly | Glu | Lys | Pro | Tyr | Glu | Cys | Ser | Glu | Cys | Gly | Lys | Thr | Phe | Xaa | Gln |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Asn | Xaa | Ala | Leu | Asn | Arg | His | Gln | Arg | Thr | His | Thr | Gly | Glu | Lys | Ala |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Tyr | Glu | Cys | Tyr | Glu | Cys | Gly | Lys | Cys | Phe | Ser | Gln | Met | Ser | Tyr | Leu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Thr | Ile | His | His | Arg | Ile | His | Ser | Gly | Glu | Asn | Leu |     |     |     |     |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

&lt;210&gt; 5505

&lt;211&gt; 111

&lt;212&gt; PRT

## 4870

&lt;213&gt; Homo sapiens

&lt;400&gt; 5505

Lys Arg Glu Phe Ala Gly Glu Lys Arg Leu Asp Leu Val Glu Asp Cys  
 1 5 10 15

Leu Gly Trp Gly Ser Thr Thr Trp Arg Phe Gln Ile His Leu Ala Cys  
 20 25 30

Lys Gln Gln Ser Tyr Pro Tyr Leu Pro His Val Asn Val Ile Ala Arg  
 35 40 45

Val Thr Leu Asp Lys Leu Gln Thr Asp Gly Pro Ser Ser Ser Pro Gly  
 50 55 60

Ala Pro Trp Met Ala Ala Leu Leu Gln Ser Val Ser Cys Phe Trp Asn  
 65 70 75 80

Ser Leu Leu Gly Asn Phe Lys Glu Glu Lys Lys Asn Leu Asn Cys Val  
 85 90 95

Glu Leu Leu Tyr Leu Leu Leu Phe Phe Phe Glu Lys Ile Asn Leu  
 100 105 110

&lt;210&gt; 5506

&lt;211&gt; 157

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (55)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (132)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5506

Thr Lys Ser Ser Ala Leu Gly Pro Arg Ala Pro Ser Leu Arg Arg His  
 1 5 10 15

Val Leu Ile His Asn Thr Leu Gln Gln Leu Gln Ala Ala Leu Arg Leu  
 20 25 30

Ala Pro Ala Pro Ala Leu Pro Pro Glu Pro Leu Phe Leu Gly Glu Glu  
 35 40 45

## 4871

Asp Phe Ser Leu Ser Ala Xaa Ile Gly Ser Ile Leu Arg Glu Leu Asp  
 50 55 60  
 Thr Ser Met Asp Gly Thr Glu Pro Pro Gln Asn Pro Val Thr Pro Leu  
 65 70 75 80  
 Gly Leu Gln Asn Glu Val Pro Pro Gln Pro Asp Pro Val Phe Leu Glu  
 85 90 95  
 Ala Leu Ser Ser Arg Tyr Leu Gly Asp Ser Gly Leu Asp Asp Phe Phe  
 100 105 110  
 Leu Asp Ile Asp Thr Ser Ala Val Glu Lys Glu Pro Ala Arg Ala Pro  
 115 120 125  
 Pro Glu Pro Xaa His Asn Leu Phe Cys Ala Pro Gly Ser Trp Glu Trp  
 130 135 140  
 Asn Glu Leu Asp His Ile Met Glu Ile Ile Leu Gly Ser  
 145 150 155

&lt;210&gt; 5507

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (11)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (36)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5507

Lys Met Met Arg Val His Gln Asp Ser Thr Xaa Glu Lys Leu Pro Phe  
 1 5 10 15

## 4872

Phe Pro Leu Xaa Ala Asp Trp Lys Ala Ser Arg Ala Xaa Leu Cys Ala  
                   20                  25                  30

Leu Phe Arg Xaa Thr His Lys Asp Leu Gly Lys Cys Lys  
                   35                  40                  45

<210> 5508

<211> 158

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (152)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5508

Asn Phe Ile Phe Ile Leu Lys Leu His Leu Leu Lys Ser Leu Lys Ile  
   1                  5                  10                  15

Ile Ser Val His Val Leu Asn Thr Ser Leu Tyr Ser Val Ile Asn Thr  
                   20                  25                  30

Pro Asp Phe Phe Pro Leu Thr Leu Cys His Pro Ser Val Cys Leu Val  
                   35                  40                  45

Ser Ser Met Pro Cys Gly Arg Gly Val Ser Leu Ser Ser Ala Gln Glu  
                   50                  55                  60

Gly Asn Phe Lys His Ile Cys Thr Ile Lys Phe Gln Ile Lys His Phe  
   65                  70                  75                  80

Lys Lys Gly Ala Gln Thr Arg Asn Thr Cys Ser Ser Glu Ile Pro Cys  
                   85                  90                  95

Cys Asn Cys Asn Ser Cys His Ile Tyr Pro Val Tyr Glu Glu Lys Phe  
                   100                  105                  110

Leu Gln Phe Ser His Cys Pro Ser Val Leu Leu Pro Gly Cys Ala Leu  
                   115                  120                  125

Leu Leu Glu Leu Lys Tyr Glu Ile Phe Thr Leu Lys Tyr Val Asn Val  
                   130                  135                  140

Lys Val Asp Arg Ile Lys Phe Xaa Asn Pro Leu Arg Phe Ile  
   145                  150                  155

## 4873

&lt;210&gt; 5509

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5509

Ile Thr Gly Met Ser His Cys Ala Arg Pro Ser Phe Leu Phe Asn Lys  
 1 5 10 15

Cys Met Tyr Leu Lys Ala Ile Ala Phe Ser Arg Asn Leu Phe Leu Cys  
 20 25 30

Ser Gly Arg Ala Tyr Lys Leu Cys Leu Gln Leu Phe Phe Phe Ser Lys  
 35 40 45

Gly Asn Thr Ser Gly Arg  
 50

&lt;210&gt; 5510

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (44)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5510

Ser Thr Arg Gln Pro Asn Pro Phe Gly Ala Thr Ile Asp Cys Tyr Lys  
 1 5 10 15

Ala His Pro Trp Val Lys Ile Tyr Tyr Leu Gln Leu Tyr Leu Met Thr  
 20 25 30

Leu Ile Leu Pro Ser Ser Tyr Ile Lys Phe Gly Xaa Val Phe Tyr Xaa  
 35 40 45

Ile Ile Phe  
 50

4874

&lt;210&gt; 5511

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (111)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (113)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5511

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Pro | Arg | Arg | Pro | Pro | Arg | Cys | Pro | Leu | Pro | Arg | Gly | Pro | Trp | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Arg | Ala | Thr | Gly | Pro | Gln | Leu | Gly | Cys | Ile | Ser | Ser | Thr | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Pro | Ala | Pro | Thr | Ser | Ser | Ser | Ala | Arg | Cys | Pro | Ala | Phe | Ser | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Ala | Gly | Ile | Pro | Ala | Gly | Leu | Val | Ala | Gly | Gly | Gly | Leu | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Gly | Leu | Gly | Pro | Glu | Pro | His | Phe | His | Arg | Cys | Leu | Pro | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Leu | Leu | Leu | Pro | Ala | Pro | Arg | Ala | Pro | Arg | Val | Gln | Asp | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Arg | Gly | Arg | Leu | Arg | His | Leu | Glu | Leu | Ile | Val | Pro | Xaa | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Ala | Leu | Ala | Leu | Ala | Ser |
|     | 115 |     |     |     |     |     | 120 |

&lt;210&gt; 5512

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (67)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4875

&lt;400&gt; 5512

Ala Ile Leu Lys Gln Thr Pro Leu Lys Lys Gln Thr Asn Lys Lys Asn  
 1 5 10 15

Ile Asp Phe Phe Ile Ser Phe Glu Leu Pro Pro Phe Tyr Tyr Val Met  
 20 25 30

Asn Met Cys Cys Phe Cys Asn Arg Lys Ile Ile Lys Leu Lys Phe Gln  
 35 40 45

Leu Gln Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
 50 55 60

Lys Lys Xaa  
 65

&lt;210&gt; 5513

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (93)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5513

Asn Ala Thr Ile Ile Val Asn Lys Ile Pro Val Asn Thr Cys Cys Leu  
 1 5 10 15

Cys Cys Leu Ser Pro Asp Ser Arg Ala Glu Phe Ser Phe Cys Thr Val  
 20 25 30

Ala Leu Ala Leu Thr Val Thr Ala Leu Gln Gln Ala Pro Ser Pro Arg  
 35 40 45

Pro Phe Arg Ser Ile Pro Gln Arg Val Leu His Val Ser Ser Pro Met  
 50 55 60

Ser Ser Leu Gly Ser Ser Val Lys Thr His Ser Ser Pro Ala Gly Val  
 65 70 75 80

Leu Arg Asp Ala Arg Ser Leu Trp Gly Gln Phe Gly Xaa Ile Asp Ile  
 85 90 95

His Val



4876

&lt;210&gt; 5514

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5514

Gly Lys Lys Arg Lys Lys Leu Tyr Phe Phe Ser Ile Tyr Leu Leu Gln  
 1 5 10 15

Arg Thr Leu Cys Phe Leu Ser Cys Lys Thr Ser Tyr Phe Ser Tyr Tyr  
 20 25 30

Cys Thr Leu Glu Lys Ser Cys Arg Phe Met Leu Asn Ser Tyr Leu Arg  
 35 40 45

Thr Ile Val Ile Ser Ser Lys Arg His Glu Leu Ser Ser  
 50 55 60

&lt;210&gt; 5515

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5515

Phe Lys Ala Leu Asn Ser Lys Ser Ile Lys Thr Tyr Leu Gly Glu Thr  
 1 5 10 15

Gly Ile Met Gln Phe Ile Thr Cys Ile His Ser Ser Ile Gln Lys Tyr  
 20 25 30

Gly Xaa Ile Trp Tyr Leu Lys Leu Lys Cys Gly Ser Lys Ala Thr Lys  
 35 40 45

Ser Glu Thr Trp Xaa  
 50

4877

&lt;210&gt; 5516

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5516

Phe Ala Asn Leu Lys Ile Gly Thr Pro Leu Gly Met Pro Asp Arg Arg  
1 5 10 15

Val Leu His Ile Cys Arg Gly Arg Gln Glu Leu Asn Ile Thr Thr Ser  
20 25 30

Phe

&lt;210&gt; 5517

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (11)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (35)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (56)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (68)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5517

Ala Thr Glu Pro Ser Leu Leu Xaa Ser Phe Xaa His Asn Phe Cys Phe  
1 5 10 15

## 4878

Ile His Asn Phe Ser Ser Ile Glu Ser Arg Ile Lys Thr Trp Val Leu  
                   20                  25                  30

Ser Leu Xaa Leu Ser Val Glu Ala Tyr Glu Cys Leu Leu Lys Ile Met  
           35                  40                  45

Phe Leu Asn Ala Leu Asn Ile Xaa Asp Tyr Lys Gly Ile Leu Leu Phe  
       50                  55                  60

Glu Ile Arg Xaa  
       65

&lt;210&gt; 5518

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5518

Thr Asn Arg Pro Leu Ser Phe Pro Gln Phe Ile Thr Phe Ser Leu Phe  
   1                  5                  10                  15

Thr Leu Cys Pro Met Thr Phe Leu His His Trp Leu Leu Phe Ile Lys  
           20                  25                  30

Pro Thr Ile Lys Asn Ile Gln Val Gln Leu Phe Leu Trp Ala Phe Ile  
       35                  40                  45

Ser Leu Trp Xaa Pro Ser Cys Arg Val Lys Leu Ile Leu Asn Lys Cys  
       50                  55                  60

Ala Cys Phe Ser Leu Ala Asn Leu Ser Phe Val Ile Glu Ile Ser Ala  
   65                  70                  75                  80

Leu Asn Leu Gly Trp Ile Glu Gly Asn Ile Cys Ser Pro Leu His  
                   85                  90                  95

&lt;210&gt; 5519

&lt;211&gt; 41

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4879

&lt;400&gt; 5519

Asp Gly Ile Val His Phe Leu Val Leu Ser Gln Val Gln Pro Val Cys  
 1 5 10 15

Gly Asn Leu Ser Leu Pro Thr Ser Phe Val Ala Leu Val Cys Ser Gly  
 20 25 30

Gln Lys Val Arg Ala Pro Leu Leu Thr  
 35 40

&lt;210&gt; 5520

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (64)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5520

Arg Cys Ser Ser Ile Phe Thr Pro Trp Lys Leu Thr Thr Leu Ser Ser  
 1 5 10 15

Phe Leu His His His Pro Gly Ala Gln Arg Ser Lys Leu Leu Ser Ile  
 20 25 30

Phe Ser Pro Ser Pro Arg Thr Leu Thr Leu Tyr Arg Met Gly Pro Ser  
 35 40 45

Ser Cys Leu Leu Leu Ile Leu Ile Pro Leu Leu Gln Leu Ile Asn Xaa  
 50 55 60

Gly Ser Thr Gln Cys Ser Leu Asp Ser Val Met Asp Lys Lys Ile Lys  
 65 70 75 80

Asp Val Leu Asn Ser Leu Glu Tyr Ser Pro Ser Pro Ile Ser Lys Lys  
 85 90 95

Leu Ser Cys Ala Ser Val Lys Ser Gln Gly Arg Pro Ser Ser Cys Pro  
 100 105 110

Ala Gly Met Ala Val Thr Gly Cys Ala Cys Gly Tyr Gly Cys Gly Ser  
 115 120 125

Trp Asp Val Gln Leu Glu Thr Thr Cys His Cys Gln Cys Ser Val Val  
 130 135 140

Asp Trp Thr Thr Ala Arg Cys Cys His Leu Thr

## 4880

145 150 155

<210> 5521  
<211> 93  
<212> PRT  
<213> Homo sapiens

<400> 5521  
Ile Lys Val Asp Gly Lys Ala Ile Ser Ile Arg Ile Glu Thr Glu Ser  
1 5 10 15  
Tyr Asn Thr Val Cys Thr Thr Leu Arg Trp Ile His Ser Ala His Ala  
20 25 30  
Leu Asn Val Tyr Ile Val Leu Ser Val Gly Ser Gly Thr Phe Ser Leu  
35 40 45  
Val Phe Leu Lys Asn Tyr Lys Ser Glu Glu Lys Ala Ser Ile Ile Asn  
50 55 60  
Lys Thr Asn Asn Cys Phe Thr Ala Leu Arg Asn Asn Asn Tyr Asn Val  
65 70 75 80  
Tyr Tyr Leu Lys Met Gly Glu Ile Val Cys Ser Met Lys  
85 90

<210> 5522  
<211> 48  
<212> PRT  
<213> Homo sapiens

<400> 5522  
Ile Ser His Ala Ile Ile Trp Val Cys Cys Ile Lys Ser Ser Thr Thr  
1 5 10 15  
Leu Trp Phe Ser His Cys Ile Ile Lys His Glu Ala Ser Arg Ile Lys  
20 25 30  
Ser Tyr Cys Phe Thr Cys Leu Leu Ser Pro Leu Cys His Phe Thr Phe  
35 40 45

<210> 5523

## 4881

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5523

His Glu Glu Lys Thr Thr Tyr Asp Ser Ala Glu Glu Glu Asn Lys Glu  
 1 5 10 15

Asn Leu Tyr Ala Gly Lys Asn Thr Lys Ile Lys Arg Ile Tyr Lys Thr  
 20 25 30

Val Ala Asp Ser Asp Glu Ser Tyr Met Glu Lys Ser Leu Tyr Gln Glu  
 35 40 45

Asn Leu Glu Ala Gln Val Lys Pro Cys Leu Glu Leu Ser Leu Gln Ser  
 50 55 60

Gly Asn Ser Thr Asp Phe Thr Thr Asp Arg Lys Ser Ser Lys Lys His  
 65 70 75 80

Ile His Asp Lys Glu Gly Thr Ala Gly Lys Ala Lys Val Lys Ser Lys  
 85 90 95

Arg Arg Leu Glu Lys Glu Glu Arg Lys Met Glu Lys Ile Arg Gln Leu  
 100 105 110

Lys Lys Lys Glu Thr Lys Asn Gln Glu Asp Asp Val Glu Gln Pro Phe  
 115 120 125

Asn Asp Ser Gly Cys Leu Leu Val Asp Lys Asp Leu Phe Glu Thr Gly  
 130 135 140

Leu Glu Asp Glu Asn Asn Ser Pro Leu Glu Asp Glu Glu Ser Leu Glu  
 145 150 155 160

Ser Ile Arg Ala Ala Val Lys Asn Lys  
 165

&lt;210&gt; 5524

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5524

Gly Gly Thr Gly Ser Glu Cys Arg Ala Gln Gly Glu Ile Gly Ser Pro  
 1 5 10 15

Cys Arg Thr Cys Ser Ser Pro Ala Pro Lys Gly Asp Gly Val Trp Ala  
 20 25 30

4882

Trp Gly Phe Leu His Val Pro Pro Tyr Pro Asp Pro Ser Ser Gln Ser  
 35 40 45

Val Thr Leu Leu Trp Ala Gln Pro Pro Asn Arg Ser His Leu Gly Leu  
 50 55 60

Gly Gln Thr  
 65

<210> 5525

<211> 172

<212> PRT

<213> Homo sapiens

<400> 5525

Pro Thr Arg Pro Pro Thr Arg Pro Pro Thr Arg Pro Asp Ser Ser Lys  
 1 5 10 15

Pro Ile Val Arg Glu Ser Trp Met Thr Glu Leu Pro Pro Glu Met Lys  
 20 25 30

Asp Phe Gly Leu Gly Pro Arg Thr Phe Lys Arg Arg Ala Asp Asp Thr  
 35 40 45

Ser Gly Asp Arg Ser Ile Trp Thr Asp Thr Pro Ala Asp Arg Glu Arg  
 50 55 60

Lys Ala Lys Glu Thr Gln Glu Ala Arg Lys Ser Ser Ser Lys Lys Asp  
 65 70 75 80

Glu Glu His Ile Leu Ser Gly Arg Asp Lys Arg Leu Ala Glu Gln Val  
 85 90 95

Ser Ser Tyr Asn Glu Ser Lys Arg Ser Glu Ser Leu Met Asp Ile His  
 100 105 110

His Lys Lys Leu Lys Ser Lys Ala Ala Glu Asp Lys Asn Lys Pro Gln  
 115 120 125

Glu Arg Ile Pro Phe Asp Arg Asp Lys Asp Leu Lys Val Asn Arg Phe  
 130 135 140

Asp Glu Ala Gln Lys Lys Ala Leu Ile Lys Lys Ser Arg Glu Leu Asn  
 145 150 155 160

Thr Arg Phe Ser His Gly Lys Gly Asn Met Phe Leu  
 165 170

4883

&lt;210&gt; 5526

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5526

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Phe | Ser | Arg | Lys | Ser | His | Leu | Ile | Pro | His | Gln | Arg | Thr | His | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Glu | Lys | Pro | Tyr | Gly | Cys | Ser | Glu | Cys | Arg | Lys | Ala | Phe | Ser | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ser | Gln | Leu | Val | Asn | His | Gln | Arg | Ile | His | Thr | Gly | Glu | Lys | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Arg | Cys | Ile | Xaa | Cys | Gly | Lys | Ala | Phe | Ser | Gln | Lys | Ser | Gln | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Asn | His | Gln | Arg | Thr | His | Thr | Val | Lys | Lys | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |

&lt;210&gt; 5527

&lt;211&gt; 398

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (382)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (395)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5527

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Val | Asn | Pro | Glu | Leu | Ile | Ile | Trp | Val | Asn | Arg | Phe | Val | Met | Cys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Val | Glu | Leu | Lys | Lys | Ala | Ser | Lys | Arg | Met | Thr | Cys | His | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |



## 4884

Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys Leu Arg  
 35 40 45  
 Lys Glu Ala Lys Lys Arg Gly His Lys Lys Pro Arg Lys Asp Pro Gly  
 50 55 60  
 Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Arg Glu Ala Glu  
 65 70 75 80  
 Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys Leu Asp  
 85 90 95  
 Arg Gln Lys Glu Leu Glu Lys Lys Arg Lys Leu Glu Thr Asn Pro Asp  
 100 105 110  
 Ile Lys Pro Ser Asn Val Glu Pro Met Glu Lys Glu Phe Gly Leu Cys  
 115 120 125  
 Lys Thr Glu Asn Lys Ala Lys Ser Gly Lys Gln Asn Ser Lys Lys Leu  
 130 135 140  
 Tyr Cys Gln Glu Leu Lys Lys Val Ile Glu Ala Ser Asp Val Val Leu  
 145 150 155 160  
 Glu Val Leu Asp Ala Arg Asp Pro Leu Gly Cys Arg Cys Pro Gln Val  
 165 170 175  
 Glu Glu Ala Ile Val Gln Ser Gly Gln Lys Lys Leu Val Leu Ile Leu  
 180 185 190  
 Asn Lys Ser Asp Leu Val Pro Lys Glu Asn Leu Glu Ser Trp Leu Asn  
 195 200 205  
 Tyr Leu Lys Lys Glu Leu Pro Thr Val Val Phe Arg Ala Ser Thr Lys  
 210 215 220  
 Pro Lys Asp Lys Gly Lys Ile Thr Lys Arg Val Lys Ala Lys Lys Asn  
 225 230 235 240  
 Ala Ala Pro Phe Arg Ser Glu Val Cys Phe Gly Lys Glu Gly Leu Trp  
 245 250 255  
 Lys Leu Leu Gly Gly Phe Gln Glu Thr Cys Ser Lys Ala Ile Arg Val  
 260 265 270  
 Gly Val Ile Gly Phe Pro Asn Val Gly Lys Ser Ser Ile Ile Asn Ser  
 275 280 285  
 Leu Lys Gln Glu Gln Met Cys Asn Val Gly Val Ser Met Gly Leu Thr  
 290 295 300

## 4885

Arg Ser Met Gln Val Val Pro Leu Asp Lys Gln Ile Thr Ile Ile Asp  
 305 310 315 320

Ser Pro Ser Phe Ile Val Ser Pro Leu Asn Ser Ser Ser Ala Leu Ala  
 325 330 335

Leu Arg Ser Pro Ala Ser Ile Glu Val Val Lys Pro Met Glu Ala Ala  
 340 345 350

Ser Ala Ile Leu Ser Gln Ala Asp Ala Arg Gln Val Val Leu Lys Tyr  
 355 360 365

Thr Val Pro Gly Tyr Arg Asn Ser Leu Gly Ile Phe Tyr Xaa Ala Cys  
 370 375 380

Ser Glu Lys Arg Tyr Ala Pro Lys Arg Trp Xaa Pro Lys Cys  
 385 390 395

<210> 5528

<211> 78

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (53)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (59)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (68)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5528

Gln Ser Gly Arg Gly Gly Asp Arg Gly Arg Ser Lys Val Asp Thr Ser  
 1 5 10 15

Ala Lys Pro Phe Ala Val Ile Ser Asp Cys Ala Val Ser Cys Pro Val  
 20 25 30

His Gln Ser Pro Leu Val Phe Asp Val Gly Gln Cys Arg Gln His Asp  
 35 40 45

## 4886

Leu Ala Gly Gln Xaa Leu Ile Tyr His Ser Xaa Asp Thr Ser Trp Ser  
 50 55 60

Leu Gly Ser Xaa His Pro Met Phe Pro Leu Phe Pro His Leu  
 65 70 75

<210> 5529

<211> 80

<212> PRT

<213> Homo sapiens

<400> 5529

Glu Pro Ala Trp Gly Asp Cys Gln Val Ala Lys Gly Lys Glu Arg Val  
 1 5 10 15

Ala Asn Cys Leu Leu His Leu Ala Ala Gln Pro Gly Leu Pro Ala Phe  
 20 25 30

Lys Gly His Phe Phe Gly Gln Glu Leu Thr Arg Met Ser Pro Glu Ser  
 35 40 45

Ser Thr Pro Arg Val Cys Gly Asn His Pro Leu Leu Asn Thr Glu Ser  
 50 55 60

Cys Arg Ile Ile Val Gly Lys Glu Ala Thr Ser Ser Glu Ala Val Val  
 65 70 75 80

<210> 5530

<211> 155

<212> PRT

<213> Homo sapiens

<400> 5530

Ala Val Thr Ser Leu Lys Ala Pro Val Ile Thr Leu Arg Ser Ser Ser  
 1 5 10 15

Ser Asn Cys His Pro Thr Ser Leu Ala Ser Cys Arg Lys Val Asn Leu  
 20 25 30

Asp Asn Thr Trp Leu Ser Phe Leu Thr Asn Ala Gly Ser Gly Arg Asn  
 35 40 45

Ser Leu Val Leu Lys Ser Lys Asn Thr Asn Cys Leu Arg Phe Ser Asn  
 50 55 60

## 4887

Thr Pro Met Lys Ala Ser His Pro Ser Leu Leu Thr Arg Phe Pro Ala  
65 70 75 80

Lys Phe Asn Cys Trp Lys Phe Phe Arg Gly Phe Phe Pro Lys Asn Ala  
85 90 95

Pro Lys Ile Leu Ile Ser Val Ser Val Ser Leu Gln Phe Phe Asn Pro  
100 105 110

Ser Leu Thr Ser Cys Gly Thr Ser Ser Lys Cys Phe Asn Lys Leu Leu  
115 120 125

Arg Leu Pro Cys Thr Ser Gln Pro Gln Gly Ser Ile Ser Ala Val Ser  
130 135 140

Cys Ser Ser Thr Phe Ile Leu Ser Ile Ser Ser  
145 150 155

<210> 5531

<211> 63

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (52)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5531

Ile Ile Val Ile Ile Gly Val Ser His His Ala Arg Pro Val Ser Ala  
1 5 10 15

Phe Ile Lys Ile Val His Ser Phe Ile His Ser Cys Ser Leu Lys Met  
20 25 30

Leu Phe Arg Lys Glu Phe Asp Lys Ile Asn Ile Ile Gln Asn Ser Lys  
35 40 45

Lys Lys Glu Xaa Ser Phe Cys Phe Ser His Lys Leu Gly Leu Leu  
50 55 60

<210> 5532

<211> 145

<212> PRT

<213> Homo sapiens

4888

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (95)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (100)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5532

Lys Gln Pro Pro Leu Gln Ser His Pro Pro Ser Gly Cys Gly Arg Pro  
 1 5 10 15

Gly Trp Pro Ala Glu Ala Pro Arg Pro Gly Leu His Pro Ser Ala Gln  
 20 25 30

Thr Thr Ala Gly Arg Ala Gly Val Gln Val Gly Gln Leu Pro Pro Phe  
 35 40 45

His Pro Ser Pro Pro Leu Leu Arg Pro His Gln Glu Gln Asp Pro Cys  
 50 55 60

Ala Ser Val Val Leu Pro Cys Leu Gln Ala Ala Cys Gly Pro Ala Val  
 65 70 75 80

Thr Gln Pro Gly Asp Thr Thr Ser Pro Gly Gly Leu Cys Ala Xaa Arg  
 85 90 95

His Leu Arg Xaa Trp Lys Pro Ser Cys Gly Arg Arg Leu Gly Glu Gly  
 100 105 110

Arg Arg Glu Gly Gly His Ala Ala Ser Val Ala Ser Thr Thr Leu Thr  
 115 120 125

Val Pro Trp Arg Trp Leu Ser Pro Asp Arg Gly Gln Thr His Arg Ala  
 130 135 140

Arg

145

&lt;210&gt; 5533

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5533

Glu Ser Trp Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro Gly Ser Thr  
 1 5 10 15

## 4889

His Ala Ser Ala Asp Ala Trp Gly Lys Thr Phe Ala Arg Tyr Leu Ser  
                   20                                  25                                  30  
 Phe Arg Arg Asp Asn Asn Glu Leu Leu Leu Phe Ile Leu Lys Gln Leu  
                   35                                  40                                  45  
 Val Ala Glu Gln Val Thr Tyr Gln Arg Asn Arg Phe Gly Ala Gln Gln  
                   50                                  55                                  60  
 Asp Thr Ile Glu Val Pro Glu Lys Asp Leu Val Asp Lys Ala Arg Gln  
                   65                                  70                                  75                                  80  
 Ile Asn Ile His Asn Leu Ser Ala Phe Tyr Asp Ser Glu Leu Phe Arg  
                                   85                                  90                                  95  
 Met Asn Lys Phe Ser His Asp Leu Lys Arg Lys Met Ile Leu Gln Gln  
                   100                                  105                                  110  
 Phe

&lt;210&gt; 5534

&lt;211&gt; 180

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5534

Phe Ser Gln His Ser Arg Leu Ala Val His Arg Arg Ile His Thr Gly  
           1                                  5                                  10                                  15  
 Glu Lys Pro Tyr Lys Cys Lys Glu Cys Gly Lys Val Phe Ser Asp Arg  
                   20                                  25                                  30  
 Ser Ala Phe Ala Arg His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr  
                   35                                  40                                  45  
 Lys Cys Lys Glu Cys Gly Lys Val Phe Ser Gln Cys Ser Arg Leu Thr  
                   50                                  55                                  60  
 Val His Leu Arg Ile His Ser Gly Glu Lys Pro Tyr Lys Cys Asn Glu  
                   65                                  70                                  75                                  80  
 Cys Gly Lys Val Tyr Ser Gln Tyr Ser His Leu Val Gly His Arg Arg  
                                   85                                  90                                  95  
 Val His Thr Gly Glu Lys Pro Tyr Lys Cys His Glu Cys Gly Lys Ala  
                   100                                  105                                  110

## 4890

Phe Asn Gln Gly Ser Thr Leu Asn Arg His Gln Arg Ile His Thr Gly  
 115 120 125  
 Glu Lys Pro Tyr Lys Cys Asn Gln Cys Gly Asn Ser Phe Ser Gln Arg  
 130 135 140  
 Val His Leu Arg Leu His Gln Thr Val His Thr Gly Asp Arg Pro Tyr  
 145 150 155 160  
 Lys Cys Asn Glu Cys Gly Gln Asn Leu Leu Asn Gly Ala Gln Thr Ser  
 165 170 175  
 Leu His Ile Arg  
 180

&lt;210&gt; 5535

&lt;211&gt; 164

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (102)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (107)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (151)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5535

Pro Arg Met Ala Thr Gln Arg Lys His Leu Val Lys Asp Phe Asn Pro  
 1 5 10 15

Tyr Ile Thr Cys Tyr Ile Cys Lys Gly Tyr Leu Ile Lys Pro Thr Thr  
 20 25 30

Val Thr Glu Cys Leu His Thr Phe Cys Lys Thr Cys Ile Val Gln His  
 35 40 45

Phe Glu Asp Ser Asn Asp Cys Pro Arg Cys Gly Asn Gln Val His Glu  
 50 55 60

Thr Asn Pro Leu Glu Met Leu Arg Leu Asp Asn Thr Leu Glu Glu Ile

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|
| 65  |     |     |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     |  |     | 80  |
| Ile | Phe | Lys | Leu | Val | Pro | Gly | Leu | Arg | Glu | Gln | Glu | Leu | Glu | Arg | Glu |  |     |     |
|     |     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     |  | 95  |     |
| Ser | Glu | Phe | Trp | Lys | Xaa | Asn | Lys | Pro | Gln | Xaa | Asn | Gly | Gln | Asp | Asp |  |     |     |
|     |     |     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |  | 110 |     |
| Thr | Ser | Lys | Ala | Asp | Lys | Pro | Lys | Val | Asp | Glu | Glu | Gly | Asp | Glu | Asn |  |     |     |
|     |     |     |     |     | 115 |     |     |     |     |     | 120 |     |     |     |     |  | 125 |     |
| Glu | Asp | Asp | Lys | Asp | Tyr | Pro | Gln | Glu | Val | Thr | His | Lys | Leu | Ala | Ile |  |     |     |
|     |     |     |     |     | 130 |     |     |     |     |     | 135 |     |     |     |     |  | 140 |     |
| Cys | Leu | Gly | Cys | Phe | Thr | Xaa | Leu | Met | Gly | Pro | Phe | Gly | Gly | His | Val |  |     |     |
| 145 |     |     |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |  |     | 160 |
| Gly | Lys | Gly | Phe |     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |

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<400> 5536
Asn Ser Val Lys Phe Cys Leu Lys Lys Pro Leu Ile Glu Phe Glu Asn
  1                               10                          15

His Lys Pro Phe Gln Val Ser Leu Trp Val Cys Phe Gly Phe Phe Phe
      20                               25                          30

Phe Phe Leu Ser Leu Trp Pro Asn Val Arg Gly Ile Arg Phe Cys Lys
      35                               40                          45

Gln Ala Ala Val Ser Ile Ser
      50                               55

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<210> 5537
<211> 64
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (24)
<223> Xaa equals any of the naturally occurring L-amino acids
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## 4892

&lt;400&gt; 5537

Ser Gly Pro Pro Gly Leu His Ser Arg Ser Ser Pro Ala Pro Ser Ala  
1 5 10 15  
Ser Val Glu Pro Gln Ala Trp Xaa Arg Asp Glu Arg Asp Ala Ala Leu  
20 25 30  
Ala Arg Gly Arg Pro Ser Ala Pro Lys Thr Arg Glu Gln Ala Pro Gly  
35 40 45  
Glu Lys Pro Leu Glu Val Ser Trp Ser Arg Glu Ser Pro Val Ser Cys  
50 55 60

&lt;210&gt; 5538

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5538

Ala Phe Asp Gly Leu Ser Thr Ser Ser Ser Gln His Ile Leu Pro Ala  
1 5 10 15  
Val Ala Ala Trp Leu Gly Leu Phe Phe Ser Tyr Pro Asn Pro Met Met  
20 25 30  
Pro Gly Thr Leu Ile Thr Val Leu His Gln Leu Leu Tyr Phe Ser Val  
35 40 45  
Tyr Phe His Asn Glu Leu Tyr Cys His Leu Asp Phe Glu Gln Leu Trp  
50 55 60  
Glu Ile Glu Asp  
65

&lt;210&gt; 5539

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5539

Gln Glu Pro Pro Ile Met Ala Glu Gly Lys Gly Gly Val Ser Cys Leu  
1 5 10 15

## 4893

Thr Trp Pro Glu Gln Glu Val Glu Arg Gly Arg Cys His Thr Leu Thr  
                   20                  25                  30  
 Asn Asn Gln Ile Ser Gly Gln Leu Thr Gln Tyr Gln Glu Asn Ser Thr  
           35                  40                  45  
 Thr Lys Leu Trp Leu Ile Ile His Glu Lys Pro Pro Thr Thr Gln Ser  
       50                  55                  60  
 Pro Pro Thr Arg Pro Tyr Leu Gln His Leu Gly Leu Gln Phe Asn Met  
       65                  70                  75                  80  
 Arg Phe Gly Gly Asn Thr Asp Pro Asn His Ile Thr His Lys Leu Gln  
                   85                  90                  95  
 Leu Leu His Thr His Asp Asn Pro Leu Ile Cys Glu Gly Leu Ile Cys  
           100                  105                  110

Ser

<210> 5540  
 <211> 33  
 <212> PRT  
 <213> Homo sapiens

<400> 5540  
 Ser Arg Tyr Tyr Ser Glu Ala Cys Ile Leu Tyr Ala Ser Gly His Val  
       1                  5                  10                  15  
 Leu Ser Cys Glu Val Arg Cys Ile Ser Tyr Cys Gly Leu Gln Ser Lys  
           20                  25                  30

Phe

<210> 5541  
 <211> 63  
 <212> PRT  
 <213> Homo sapiens

<400> 5541  
 Gly Ala Asp Ser Ala Cys Pro Gly Pro Ala Lys Trp Leu Ser Ser Leu  
       1                  5                  10                  15  
 Arg Ala His Val Val Arg Thr Gly Ile Gly Gln Ala Arg Ala Lys Leu  
           20                  25                  30

## 4894

Phe Glu Lys Gln Ile Val Gln His Gly Gly Gln Leu Cys Pro Ala Gln  
                   35                                  40                                  45

Gly Pro Gly Val Thr His Ile Val Val Asp Glu Ala Trp Thr Met  
           50                                  55                                  60

<210> 5542

<211> 62

<212> PRT

<213> Homo sapiens

<400> 5542

Met Ser Gln Ala Gly Asn Ser Glu Val Tyr Leu Ala Ile His Val Phe  
       1                                  5                                  10                                  15

Lys Met Ala Ala Ser Arg Arg Phe Thr Gly Val Pro Asp Arg Arg Gly  
                   20                                  25                                  30

Gly Gly Ala Gln Ala Arg Met Lys Leu Glu Leu Ala Arg Ser Arg Lys  
           35                                  40                                  45

Thr Ile Ala Gly Gly Thr Ala Ser Val Gly Ala Glu Glu Thr  
       50                                  55                                  60

<210> 5543

<211> 317

<212> PRT

<213> Homo sapiens

<400> 5543

Gly Gly Pro Met Lys Asp Cys Glu Tyr Ser Gln Ile Ser Thr His Ser  
       1                                  5                                  10                                  15

Ser Ser Pro Met Glu Ser Pro His Lys Lys Lys Lys Ile Ala Ala Arg  
                   20                                  25                                  30

Arg Lys Trp Glu Val Phe Pro Gly Arg Asn Lys Phe Phe Cys Asn Gly  
           35                                  40                                  45

Arg Ile Met Met Ala Arg Gln Thr Gly Val Phe Tyr Leu Thr Leu Val  
       50                                  55                                  60

Leu Ile Leu Val Thr Ser Gly Leu Phe Phe Ala Phe Asp Cys Pro Tyr  
       65                                  70                                  75                                  80

Leu Ala Val Lys Ile Thr Pro Ala Ile Pro Ala Val Ala Gly Ile Leu

## 4895

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 85  |  | 90  |  | 95  |
| Phe Phe Phe Val Met Gly Thr Leu Leu Arg Thr Ser Phe Ser Asp Pro | 100 |  | 105 |  | 110 |
| Gly Val Leu Pro Arg Ala Thr Pro Asp Glu Ala Ala Asp Leu Glu Arg | 115 |  | 120 |  | 125 |
| Gln Ile Asp Ile Ala Asn Gly Thr Ser Ser Gly Gly Tyr Arg Pro Pro | 130 |  | 135 |  | 140 |
| Pro Arg Thr Lys Glu Val Ile Ile Asn Gly Gln Thr Val Lys Leu Lys | 145 |  | 150 |  | 155 |
| Tyr Cys Phe Thr Cys Lys Ile Phe Arg Pro Pro Arg Ala Ser His Cys | 165 |  | 170 |  | 175 |
| Ser Leu Cys Asp Asn Cys Val Glu Arg Phe Asp His His Cys Pro Trp | 180 |  | 185 |  | 190 |
| Val Gly Asn Cys Val Gly Lys Arg Asn Tyr Arg Phe Phe Tyr Met Phe | 195 |  | 200 |  | 205 |
| Ile Leu Ser Leu Ser Phe Leu Thr Val Phe Ile Phe Ala Phe Val Ile | 210 |  | 215 |  | 220 |
| Thr His Val Ile Leu Arg Ser Gln Gln Thr Gly Phe Leu Asn Ala Leu | 225 |  | 230 |  | 235 |
| Lys Asp Ser Pro Ala Ser Val Leu Glu Ala Val Val Cys Phe Phe Ser | 245 |  | 250 |  | 255 |
| Val Trp Ser Ile Val Gly Leu Ser Gly Phe His Thr Tyr Leu Ile Ser | 260 |  | 265 |  | 270 |
| Ser Asn Gln Thr Thr Asn Glu Asp Ile Lys Gly Ser Trp Ser Asn Lys | 275 |  | 280 |  | 285 |
| Arg Gly Lys Glu Asn Tyr Asn Pro Tyr Ser Tyr Gly Asn Ile Phe Thr | 290 |  | 295 |  | 300 |
| Asn Cys Cys Val Ala Leu Cys Gly Pro Ser His Gln Ala             | 305 |  | 310 |  | 315 |

&lt;210&gt; 5544

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4896

&lt;400&gt; 5544

Ile Val Gly Leu Phe His Met Cys Ser Leu Lys Tyr Leu Asn Asn His  
 1 5 10 15

Ser Phe His Ser Leu Phe Ser Ser Gln Ala Phe Ser Arg Ser Ser Met  
 20 25 30

Trp Ile Leu Lys Asp Leu Pro Ser Leu Thr Arg Ile Thr Phe Lys Gly  
 35 40 45

Asp Cys Phe Lys Ile Phe Leu Gln Ile Glu Ile Arg Thr Glu Arg Leu  
 50 55 60

Arg Asn Ile Val Tyr Phe Ala Lys Thr Arg Cys Leu  
 65 70 75

&lt;210&gt; 5545

&lt;211&gt; 117

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5545

Glu Thr Leu Val Asn Trp Ser Thr Gly Glu Ser Tyr Lys Trp Pro Met  
 1 5 10 15

Ser Gln Lys Ser Trp Asp Leu Leu Pro Ala Ala Ala Asp Ala Asp Arg  
 20 25 30

Pro Trp Glu Ala Ala Val Leu Trp Arg Ser Trp Ser Ser Ser Phe Leu  
 35 40 45

Gly Leu Ala Trp Leu Pro Gln Lys Glu Gln Ser Gly Leu Glu Gly Ser  
 50 55 60

Ile Lys Phe Tyr Thr His Lys Leu Gln Leu Glu Val Ser Phe Leu Lys  
 65 70 75 80

Cys Pro Ala Phe Ala Gln Leu Phe Gln Ile Ile Ser Phe Leu Arg Leu  
 85 90 95

Trp Gln Val Ser Cys Pro Pro Ser Tyr Ser Ser Val Phe Thr Ser Ser  
 100 105 110

Arg Gln Gln Ser Gly  
 115

&lt;210&gt; 5546

## 4897

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5546

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gln | Ile | Asn | His | Pro | Asp | Leu | Lys | Val | Asn | Thr | Phe | Tyr | Phe | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Arg | Ser | Ile | Thr | Glu | Tyr | Ala | Ala | Phe | Arg | Tyr | Arg | Phe | Asn | Leu |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asp | Phe | Leu | Lys | Ile | Leu | Tyr | Phe | Tyr | Ile | Ala | Thr | Thr | Gly | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Met | Gln | Leu | Asn | Cys | Tyr | Leu | Asn | Lys | Leu | His | Leu | Met | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |
|-----|-----|-----|
| Lys | Lys | Lys |
| 65  |     |     |

&lt;210&gt; 5547

&lt;211&gt; 315

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (115)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5547

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ile | Glu | Gln | Glu | Asn | Glu | Lys | Leu | Lys | Ala | Glu | Leu | Glu | Lys | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | His | Leu | Gly | His | Gln | Leu | Ser | Met | His | Tyr | Glu | Ser | Lys | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gly | Thr | Glu | Lys | Ile | Ile | Ala | Glu | Asn | Glu | Arg | Leu | Arg | Lys | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Lys | Glu | Thr | Asp | Ala | Ala | Glu | Lys | Leu | Arg | Ile | Ala | Lys | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Glu | Ile | Leu | Asn | Glu | Lys | Met | Thr | Val | Gln | Leu | Glu | Glu | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Lys | Arg | Leu | Gln | Phe | Ala | Glu | Ser | Arg | Gly | Pro | Gln | Leu | Glu | Gly |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

## 4898

Ala Asp Ser Lys Ser Trp Lys Ser Ile Val Val Thr Arg Met Tyr Glu  
 100 105 110  
 Thr Lys Xaa Lys Glu Leu Glu Thr Asp Ile Ala Lys Lys Asn Gln Ser  
 115 120 125  
 Ile Thr Asp Leu Lys Gln Leu Val Lys Glu Ala Thr Glu Arg Glu Gln  
 130 135 140  
 Lys Val Asn Lys Tyr Asn Glu Asp Leu Glu Gln Gln Ile Lys Ile Leu  
 145 150 155 160  
 Lys His Val Pro Glu Gly Ala Glu Thr Glu Gln Gly Leu Lys Arg Glu  
 165 170 175  
 Leu Gln Val Leu Arg Leu Ala Asn His Gln Leu Asp Lys Glu Lys Ala  
 180 185 190  
 Glu Leu Ile His Gln Ile Glu Ala Asn Lys Asp Gln Ser Gly Ala Glu  
 195 200 205  
 Ser Thr Ile Pro Asp Ala Asp Gln Leu Lys Glu Lys Ile Lys Asp Leu  
 210 215 220  
 Glu Thr Gln Leu Lys Met Ser Asp Leu Glu Lys Gln His Leu Lys Glu  
 225 230 235 240  
 Glu Ile Lys Lys Leu Lys Lys Glu Leu Glu Asn Phe Asp Pro Ser Phe  
 245 250 255  
 Phe Glu Glu Ile Glu Asp Leu Lys Tyr Asn Tyr Lys Glu Glu Val Lys  
 260 265 270  
 Lys Asn Ile Leu Leu Glu Glu Lys Val Lys Lys Leu Ser Glu Gln Leu  
 275 280 285  
 Gly Val Glu Leu Thr Ser Pro Val Ala Ala Ser Glu Glu Phe Glu Asp  
 290 295 300  
 Glu Glu Glu Ser Pro Val Asn Phe Pro Ile Tyr  
 305 310 315

&lt;210&gt; 5548

&lt;211&gt; 191

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5548

Gln Leu Asn Thr Ser Ser Thr Asn His Gln Leu Pro Ser Glu His Gln

## 4899

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Thr Ile Leu Ser Ser Arg Asp Ser Arg Asn Ser Leu Arg Ser Asn Phe | 20  | 25  | 30  |
| Ser Ser Arg Glu Ser Glu Ser Ser Arg Ser Asn Thr Gln Pro Gly Phe | 35  | 40  | 45  |
| Ser Tyr Ser Ser Ser Arg Asp Glu Ala Pro Ile Ile Ser Asn Ser Glu | 50  | 55  | 60  |
| Arg Val Val Ser Ser Gln Arg Pro Phe Gln Glu Ser Ser Asp Asn Glu | 65  | 70  | 75  |
| Gly Arg Arg Thr Thr Arg Arg Leu Leu Ser Arg Ile Ala Ser Ser Met | 85  | 90  | 95  |
| Ser Ser Thr Phe Phe Ser Arg Arg Ser Ser Gln Asp Ser Leu Asn Thr | 100 | 105 | 110 |
| Arg Ser Leu Asn Ser Glu Asn Ser Tyr Val Ser Pro Arg Ile Leu Thr | 115 | 120 | 125 |
| Ala Ser Gln Ser Arg Ser Asn Val Pro Ser Ala Ser Glu Val Pro Asp | 130 | 135 | 140 |
| Asn Arg Ala Ser Glu Ala Ser Gln Gly Phe Arg Phe Leu Arg Arg Arg | 145 | 150 | 155 |
| Trp Gly Leu Ser Ser Leu Ser His Asn His Ser Ser Glu Ser Asp Ser | 165 | 170 | 175 |
| Glu Asn Phe Asn Gln Glu Ser Glu Gly Arg Asn Thr Gly Pro Trp     | 180 | 185 | 190 |

&lt;210&gt; 5549

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (57)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5549

|   |   |   |    |    |
|---|---|---|----|----|
| Ala Asn Thr Ser Thr Arg Ala Ala Leu Tyr Cys Leu Phe Leu Ser Phe | 1 | 5 | 10 | 15 |
|---|---|---|----|----|



Ile Met Phe Ala Ser Val Leu Gln Ile Asn Pro Arg Ser Trp Leu Met  
20 25 30

Asn Ala Gln Arg Ile Gly Ala Ala Xaa Leu Trp Ala Leu Ile Tyr Asn  
50 55 60

Val Asp Glu Ala Tyr Ser Leu Ala Lys Lys Thr Phe Pro Asn Ser Glu  
85 90 95

Gln Leu Leu Asn Ser Ser Leu Ser Ala His Gly Met Pro Thr Pro  
115 120 125

<213> Homo sapiens

<223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

Leu Asn His Leu Gln Asn Ala Ser Thr Pro Gly Tyr Ser Lys Leu Pro  
1 5 10 15

Ser Trp Leu Leu Val Gly Ala Ile Ser Cys Val Asp Pro Gln Val Arg  
35 40 45

Gly Pro Gly Pro Pro Ala Pro Pro Xaa Gln Arg Gly Glu Pro Ala Gln  
50 55 60

## 4901

Phe Phe Trp Ser Leu Lys Cys Val Pro Leu Leu Val Ala Arg Ser Pro  
 65 70 75 80

Gln Trp Gly Gly Leu Thr Arg Thr Arg  
 85

<210> 5551

<211> 98

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (81)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (84)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5551

Ala Arg Gln Val Lys Ser Leu Arg Asp Pro Ser Ala Lys Met Ser Lys  
 1 5 10 15

Ser Asp Pro Asp Lys Leu Ala Thr Val Arg Ile Thr Asp Ser Pro Glu  
 20 25 30

Glu Ile Val Gln Lys Phe Arg Lys Ala Val Thr Asp Phe Thr Ser Glu  
 35 40 45

Val Thr Tyr Asp Pro Ala Gly Arg Ala Gly Val Ser Asn Ile Val Ala  
 50 55 60

Val His Ala Ala Val Thr Gly Leu Ser Val Glu Glu Val Val Arg Arg  
 65 70 75 80

Xaa Ala Gly Xaa Glu His Cys Ser Leu Gln Ala Gly Arg Gly Arg Cys  
 85 90 95

Cys Asp

<210> 5552

<211> 74

<212> PRT

<213> Homo sapiens

## 4902

&lt;400&gt; 5552

Thr Glu Glu Val Asp Ser Val Ala Val Ser Val Leu Ala Leu Gly Ser  
1 5 10 15  
Arg Ile Gly Glu Leu Arg Ala Pro Ile Trp Asp Glu Glu Ser Arg Lys  
20 25 30  
Gln Leu Ser Ile Ser Ile Lys Arg Ala Glu Gln Pro Leu Ser Leu His  
35 40 45  
Pro Pro Ser Ala Leu Phe Ser Leu Pro Pro Ser Leu Leu Ser Phe His  
50 55 60  
Ser Val Tyr Val Ser Phe Gly Pro Ile Pro  
65 70

&lt;210&gt; 5553

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5553

Gly Thr Gly Ser Gln Cys Thr Gln His Gly Ala Ile Ser Asp Val Ile  
1 5 10 15  
Gln Arg Met Arg Gln Asp Lys Ser Tyr Cys Leu Ile Lys Gly Lys Leu  
20 25 30  
Gly Thr Gly Met Leu Phe Lys Leu Arg Lys Ile Phe Trp Gly Val Lys  
35 40 45  
Leu Asp Ser Thr Glu Ser Leu Glu Lys Leu Ala Trp Arg Glu Lys Arg  
50 55 60  
His  
65

&lt;210&gt; 5554

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4903

<220>  
 <221> SITE  
 <222> (26)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (42)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (45)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (54)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (75)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5554  
 Ala Pro Thr Asn Leu Phe Phe Phe Phe Phe Glu Thr Glu Ser Gly  
           1                  5                  10                  15  
 Cys Ala Ser His Phe Leu Ser Phe Xaa Xaa Ser Glu Leu Thr Glu Gln  
                   20                  25                  30  
 Pro Gly Arg Cys Gly Phe Arg Ser Leu Xaa Leu Ser Xaa Cys Ala Lys  
           35                  40                  45  
 Cys Trp Gly Arg Arg Xaa Gln Arg Val Asp Ser Gly Met Val Pro Ala  
           50                  55                  60  
 Ala Ser His Phe Tyr Ala Lys Pro Asp Phe Xaa Ser His Pro Gly Gly  
           65                  70                  75                  80  
 Gln Phe

<210> 5555  
 <211> 47  
 <212> PRT  
 <213> Homo sapiens

## 4904

&lt;400&gt; 5555

```

Ile Phe Ile Ile Glu Val Ser Phe Pro Leu Gly Ile Ser Leu Ser Leu
 1             5             10             15

Phe Phe Phe Asn Glu Asn Gln Ser Thr Glu Tyr Phe Val Ser Pro Arg
      20             25             30

Lys Thr Pro Gln Leu Ser Ile Met Leu Ser Thr Arg Glu Lys Leu
      35             40             45

```

&lt;210&gt; 5556

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (103)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5556

```

Gly Asn Cys Gln Lys Cys Ala Phe Gly Tyr Ser Gly Leu Asp Cys Lys
 1             5             10             15

Asp Lys Phe Gln Leu Ile Leu Thr Ile Val Gly Thr Ile Ala Gly Ile
      20             25             30

Val Ile Leu Ser Met Ile Ile Ala Leu Ile Val Thr Ala Arg Ser Asn
      35             40             45

Asn Lys Thr Lys His Ile Glu Glu Glu Asn Leu Ile Asp Glu Asp Phe
      50             55             60

Gln Asn Leu Lys Leu Arg Ser Thr Gly Phe Thr Asn Leu Gly Ala Glu
      65             70             75             80

Gly Ser Val Phe Pro Lys Val Arg Ile Thr Ala Ser Arg Asp Ser Gln
      85             90             95

Met Gln Asn Pro Tyr Ser Xaa His Ser Ser Met Pro Arg Pro Asp Tyr
      100            105            110

```

&lt;210&gt; 5557

## 4905

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (143)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (147)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (151)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5557

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Thr | Ala | Arg | Ser | Pro | Trp | Glu | Tyr | Thr | Asn | Leu | Cys | Ser | Arg | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Ala | Ser | Leu | Leu | Glu | Thr | Val | Leu | Ile | Phe | Phe | Phe | Leu | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Phe | Gln | Leu | Ile | Leu | Thr | Ile | Val | Gly | Thr | Ile | Ala | Gly | Ile | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Ser | Met | Ile | Ile | Ala | Leu | Ile | Val | Thr | Ala | Arg | Ser | Asn | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Lys | His | Ile | Glu | Glu | Glu | Asn | Leu | Ile | Asp | Glu | Asp | Phe | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Lys | Leu | Arg | Ser | Thr | Gly | Phe | Thr | Asn | Leu | Gly | Ala | Glu | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Phe | Pro | Lys | Val | Arg | Ile | Thr | Ala | Ser | Arg | Asp | Ser | Gln | Met |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asn | Pro | Tyr | Ser | Ser | His | Thr | Gln | Lys | Lys | Lys | Lys | Lys | Lys | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Lys | Xaa | Lys |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Xaa | Lys | Lys | Lys | Xaa | Gly |
| 145 |     |     |     |     | 150 |     |     |

## 4906

&lt;210&gt; 5558

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (44)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5558

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Xaa | Val | Xaa | Glu | Lys | Ser | Ile | Leu | Leu | Val | Ser | Leu | Xaa |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Cys | Leu | Val | Leu | Ser | Glu | Ile | Pro | Phe | Met | Ser | Thr | Trp | Phe | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Ser | Thr | Phe | Ser | Met | Leu | Pro | Leu | Leu | Xaa | Lys | Asp | Glu | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Met | Pro | Ser | Val | Val | Thr | Thr | Met | Ala | Phe | Phe | Ile | Ala | Cys | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Phe | Ser | Ile | Phe | Glu | Lys | Thr | Ser | Glu | Glu | Glu | Leu | Gln | Leu |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ser | Phe | Ser | Ile | Ser | Val | Arg | Lys | Tyr | Leu | Pro | Cys | Phe | Thr | Phe |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Arg | Ile | Ile | Gln | Tyr | Leu | Phe | Leu | Ile | Ser | Val | Ile | Thr | Met |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Leu | Thr | Leu | Met | Thr | Val | Thr | Leu | Asp | Pro | Pro | Gln | Lys | Leu |
|     |     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |

## 4907

Pro Asp Leu Phe Ser Val Leu Val Cys Phe Val Ser Cys Leu Asn Phe  
 130 135 140

Leu Phe Phe Leu Val Tyr Phe Asn Ile Ile Ile Met Trp Asp Ser Lys  
 145 150 155 160

Ser Gly Arg Asn Gln Lys Lys Ile Ser  
 165

<210> 5559

<211> 67

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (52)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (56)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (61)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5559

Gly Trp Arg His Gly Gly Glu His His Gln Asp His Val Glu Leu Gly  
 1 5 10 15

Arg Asp Cys Pro Pro Lys Lys Asn Ile Gly Pro Leu Gln Ala Gln Pro  
 20 25 30

Pro Leu Pro Leu Glu Phe Phe Ser Gln Ala Gln Cys Gln Lys Phe Ser  
 35 40 45

Leu Gly Trp Xaa Gln Ile Cys Xaa Thr Gly Phe Pro Xaa Ser Ser Thr  
 50 55 60

Leu Pro Pro  
 65

<210> 5560

<211> 115



## 4908

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (109)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5560

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Lys | Cys | Gly | Phe | Ser | Cys | Ile | Ser | Gln | Ile | Gly | Arg | Pro | Gly |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Val | Gly | Val | Pro | Gly | Gly | Arg | Leu | Trp | Ala | Gly | Ser | Gln | Asp | Pro |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Phe | Leu | Gly | Gly | Asp | Arg | Ala | Cys | Gly | Ala | Ala | Pro | Arg | Asn | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Arg | Lys | Arg | Glu | Arg | Ala | Leu | Ala | Pro | Ser | Ala | Ser | Cys | Leu | Arg |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Trp | Arg | Leu | Pro | Ile | Arg | Trp | Phe | Tyr | Pro | Gln | Thr | Pro | Gly | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Glu | Ser | Arg | Arg | Lys | Gly | Gln | Pro | Arg | Ile | Pro | Ala | Gly | Phe | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Arg | Gly | Ala | Ser | Gln | Phe | Leu | His | Leu | Ile | Phe | Xaa | Ser | Cys | Gly |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |

|     |     |     |
|-----|-----|-----|
| Arg | Cys | Tyr |
|     |     | 115 |

&lt;210&gt; 5561

&lt;211&gt; 210

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (137)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (142)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4909

<221> SITE  
 <222> (171)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (179)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (193)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (197)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (210)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5561  
 Glu Glu Ala Ala Lys Ala Ala Gly Thr His Phe Thr Ser Gln Gln Leu  
     1                    5                    10                    15  
 Gln Glu Leu Glu Ala Thr Phe Gln Arg Asn Arg Tyr Pro Asp Met Ser  
                     20                    25                    30  
 Thr Arg Glu Glu Ile Ala Val Trp Thr Asn Leu Thr Glu Ala Arg Val  
             35                    40                    45  
 Arg Val Trp Phe Lys Asn Arg Arg Ala Lys Trp Arg Lys Arg Glu Arg  
             50                    55                    60  
 Asn Gln Gln Ala Glu Leu Cys Lys Asn Gly Phe Gly Pro Gln Phe Asn  
     65                    70                    75                    80  
 Gly Leu Met Gln Pro Tyr Asp Asp Met Tyr Pro Gly Tyr Ser Tyr Asn  
                     85                    90                    95  
 Asn Trp Ala Ala Lys Gly Leu Thr Ser Ala Ser Leu Ser Thr Lys Ser  
             100                    105                    110  
 Phe Pro Phe Phe Asn Ser Met Asn Val Asn Pro Leu Ser Ser Gln Ser  
             115                    120                    125  
 Met Phe Ser Pro Pro Asn Ser Ile Xaa Ser Met Ser Met Xaa Ser Ser  
     130                    135                    140

## 4910

Met Val Pro Ser Ala Val Thr Gly Val Pro Gly Ser Ser Leu Asn Ser  
 145 150 155 160

Leu Asn Asn Leu Asn Asn Leu Ser Ser Pro Xaa Leu Asn Ser Ala Val  
 165 170 175

Pro Thr Xaa Ala Cys Pro Tyr Ala Pro Pro Thr Ser Ser Val Cys Leu  
 180 185 190

Xaa Gly His Val Xaa Ser Ser Leu Ala Ser Leu Arg Leu Lys Ala Lys  
 195 200 205

Gln Xaa  
 210

&lt;210&gt; 5562

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5562

Thr Leu Thr Val Gln Val Val His Cys Asn Glu Val Thr His Ile Cys  
 1 5 10 15

Trp Leu His Lys Leu Gln Val Leu Leu Ser Gln Tyr Gly Thr Leu Asn  
 20 25 30

Cys Asp Val Val Gln Gln Leu Pro Ala Ser Ser Gln Leu Ile Arg Cys  
 35 40 45

Glu Tyr Phe Gly Leu Asp Leu Gln Pro Asp Ala Val Leu Gln Pro Lys  
 50 55 60

Lys Lys Val Glu Pro Met Ile Lys Asn Cys Ser Gln Asp Glu Pro Gly  
 65 70 75 80

Lys Lys Ser Ala Lys Leu Pro Trp Arg Ser Ala Gly Thr Leu Val Met  
 85 90 95

Thr Gly Ile Thr Pro  
 100

&lt;210&gt; 5563

&lt;211&gt; 117

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4911

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (94)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5563

Ile Pro Pro Ala Gln Leu Trp Gln Arg Leu Leu Ala Leu Val Ile Ser  
 1 5 10 15

Ser Ile Ile Gln Ile His Tyr His Pro Asn Pro Ser Pro Ile Phe Gly  
 20 25 30

Leu Gly Glu Lys Asn Met Asn Tyr Asp Asp Arg Thr Ser Ser Lys Pro  
 35 40 45

Ser Pro Val Leu Ser Glu Tyr Pro Phe Trp Gly Cys Ile Pro Gln Lys  
 50 55 60

Pro Ile Trp Gly Pro Ile Ser Met Tyr Thr Glu Leu Lys Phe Gln Val  
 65 70 75 80

Pro Leu Cys Ile Lys Arg Ser Gln Asn Phe Gly Gln Ala Xaa Gly Thr  
 85 90 95

Leu Lys Ser His Gln Cys Asn Tyr Thr Leu Glu Ile Ile Asn Pro Ser  
 100 105 110

His Asp Tyr Ile Ser  
 115

&lt;210&gt; 5564

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5564

Leu Pro Val Phe Glu Asp Val Gly Arg Val Cys Lys Tyr Ser Ala Phe  
 1 5 10 15

Pro Leu Thr His Ala Gly Glu Asp Ala Ser Ser Leu Ala Pro Ala Val  
 20 25 30

Arg Ala Gln Ile Ala Arg Val Lys Thr Ser Ser Leu Gly Arg Glu Val  
 35 40 45

Cys Arg Gly Leu Glu Val Ile  
 50 55

## 4912

&lt;210&gt; 5565

&lt;211&gt; 47

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5565

Lys Leu Lys Glu Ile Lys Lys Leu Leu Glu Glu Asn Ala Gly Ile Asn  
1 5 10 15

Leu Tyr Asp Leu Arg Leu Gly Ser Gly Phe Leu Asp Met Thr Pro Lys  
20 25 30

Ala Lys Gln Gln Lys Lys Glu Asn Leu Lys Trp Met Ser Ser Glu  
35 40 45

&lt;210&gt; 5566

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5566

Gly Pro Val Leu His Gln Arg Ile Leu Ile Ser Ala Ser Gly Val Gly  
1 5 10 15

Glu Xaa Arg Xaa Ile Tyr Ile Gly Gln Asn Arg Gly Val Glu Gln Asp  
20 25 30

Tyr Ser Ile Phe  
35

&lt;210&gt; 5567

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4913

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5567

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Ala | Val | Val | Gly | Val | Xaa | Arg | Val | Met | Thr | Trp | Ser | Gly | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Trp | Ala | Asp | Val | His | Ile | Val | Cys | Thr | Leu | Asp | Pro | Trp | Pro | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Gln | Ile | Leu | Thr | Ser | Arg | Asn | Phe | His | Leu | Met | Asn | Ile | Met |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ile | Gly | Gly | Lys | Glu | Asn | Ser | Leu | Tyr | Arg | Ile | Asn | Pro | Ser | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |

|     |     |     |
|-----|-----|-----|
| Leu | Gln | Gly |
| 65  |     |     |

&lt;210&gt; 5568

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5568

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asn | Ala | Phe | Gln | Asp | Leu | Ser | Ser | Thr | His | Pro | Leu | Ser | Leu | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Pro | His | Ile | Trp | Gly | His | Asn | Ser | Thr | Cys | Val | Lys | Asp | Asn | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Phe | Thr | Glu | Pro | Pro | Gly | Ile | Gln | Asp | Asn | Lys | Xaa | Leu | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asp | Gln | Gln | Val | Ser | Phe | Ser | Ala | Pro | Ser | Phe | Ile | Thr | Pro | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |

## 4914

Phe Pro Ser Glu Val His Thr His Pro Tyr Met Ala Ala Val Gly Ile  
 65 70 75 80

Ser Thr Gly

<210> 5569

<211> 58

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (39)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5569

Met Val Leu Ser Pro Ser Gly Val Ser Lys Cys Ile Arg Lys Gln Asn  
 1 5 10 15

Ser Val Val Ser His Ser Ser Leu Cys Ala Arg Cys Leu Arg Arg Gly  
 20 25 30

Ser Tyr Arg Ser Pro Arg Xaa Asn Gln Ala His Leu Ser Leu Gly Val  
 35 40 45

Gly Gln Ser Gly Lys Ala Phe Trp Lys Met  
 50 55

<210> 5570

<211> 109

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (90)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (97)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5570

Ser His Thr Thr Lys Asn Thr Asp Phe Thr Asp Leu Val Leu Glu Asn  
 1 5 10 15

## 4915

His Tyr Thr Asn Ser Asn Asn Asn Ala Pro Gly Thr Lys Gly Glu Glu  
                   20                                  25                                  30  
 Met Ser Ser Arg Val Gly Ile Leu Phe Lys Cys Leu Val Phe Asn Lys  
                   35                                  40                                  45  
 Asn Asn Tyr Lys Thr Gln Ser Lys Thr Arg Lys Tyr Gly Pro Tyr Pro  
                   50                                  55                                  60  
 Gly Lys Asn Lys Gln Pro Ile Glu Ala Val Leu Glu Glu Val Asn Ile  
                   65                                  70                                  75                                  80  
 Leu Asp Leu Leu Glu Asn Asp Phe Asn Xaa Ser Ile Ile Asn Met Phe  
                                   85                                  90                                  95  
 Xaa Lys Leu Lys Glu Ala Arg Cys Gly Gly Ser Arg Leu  
                   100                                  105

&lt;210&gt; 5571

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5571

Asn Asp Asn Lys Gly Phe Arg Thr Ile Thr Ala Ser Ala Pro Gly Pro  
   1                                  5                                  10                                  15  
 Thr Pro Ser Ser Glu Arg Arg Ser Val Val Gly Asn Met Leu Ser Asn  
                   20                                  25                                  30  
 Ser Val Thr Cys Tyr Arg Gly Ile Phe Gly Glu Arg Lys Ser Gln Cys  
                   35                                  40                                  45  
 Gly Lys Leu His Cys Cys Leu Ile Leu Ile Ala Thr Ala Thr Ser Thr  
                   50                                  55                                  60  
 Phe Ser Asn His His Pro Asp Ser Val Ser Ser His Gln His Gln Gly  
                   65                                  70                                  75                                  80  
 Glu Thr Leu Tyr His Gln Lys Asp Tyr Asn Leu Leu Lys Ala Gln Met  
                                   85                                  90                                  95  
 Ile Ile Ser Ile Phe  
                   100

&lt;210&gt; 5572



## 4916

<211> 40  
 <212> PRT  
 <213> Homo sapiens

<400> 5572  
 Asp Arg His Ala Leu Gln Ile Phe Leu Tyr Lys Ser Gly Ser Leu Phe  
 1 5 10 15  
 Pro Ile Val Leu Thr Leu Arg Leu Ser Val Gly Leu Pro Ile Arg Phe  
 20 25 30  
 Thr Ala Val Gln Val His Lys Met  
 35 40

<210> 5573  
 <211> 59  
 <212> PRT  
 <213> Homo sapiens

<400> 5573  
 Ser Trp Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro Gly Ser Thr His  
 1 5 10 15  
 Ala Ser Ala Lys Ile Arg Thr Ala His Arg Arg Val Met Ile Leu Asn  
 20 25 30  
 His Pro Asp Lys Gly Gly Ser Pro Tyr Val Ala Ala Lys Ile Asn Glu  
 35 40 45  
 Ala Lys Asp Leu Leu Glu Thr Thr Thr Lys His  
 50 55

<210> 5574  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<400> 5574  
 Ser Lys Asp Leu Val Phe Phe Thr Gln His Val Ser Arg Ile His Lys  
 1 5 10 15  
 Phe Tyr Cys Phe Ile Ala Val Ile Phe Ile Asp Val Tyr Phe Ile Val  
 20 25 30  
 Gly Leu Tyr Asn Ile Leu Leu Arg Asn Thr Tyr Ile Tyr Asn Lys Leu  
 35 40 45

## 4917

Tyr Ile Phe  
50

<210> 5575

<211> 60

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (47)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (48)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (51)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5575

Tyr Cys Ser Phe Ser Ser Phe Phe Ala Val Ala Ser Ser Ser Leu Val  
1 5 10 15

Lys Thr Leu Lys Lys Asn Thr Ala Leu Pro Trp Glu Ile Ile Thr Leu  
20 25 30

Pro Asn Thr Pro Leu Val Gly Asn Lys Arg Phe Tyr Gly Thr Xaa Xaa  
35 40 45

Lys Lys Xaa Ser Thr Cys Pro Phe Phe Leu Pro Val  
50 55 60

<210> 5576

<211> 72

<212> PRT

<213> Homo sapiens

<400> 5576

Ser Ser Gln Ile Lys Pro Pro Glu Ser Pro His Tyr Lys Ile Gln Ser  
1 5 10 15

Tyr His Ala Ser Leu Pro Ser Val Tyr Lys Ile Cys Pro Ser Leu Gln  
20 25 30

## 4918

Leu Gly Glu Thr Asp Leu Gly Gln Thr Pro Val Ser Leu Leu Gly Cys  
                   35                                  40                                  45

Leu Ala Ile Asn Phe Ser Leu Tyr Lys Thr Pro Val Leu Gln Cys Leu  
                   50                                  55                                  60

Val Phe Gln Cys Glu Pro Gly Asn  
                   65                                  70

<210> 5577

<211> 64

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (36)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5577

Val Leu Asn Lys Ser Leu Leu Tyr Glu Asn Lys Gln Tyr Phe Leu Tyr  
                   1                                  5                                  10                                  15

Leu Ser Phe Gly Cys Ile Phe Pro Tyr Phe Val Ile Ser Phe Phe Leu  
                                   20                                  25                                  30

Thr Phe Tyr Xaa Xaa Ile Leu Thr Leu Phe Leu Ser Phe Ala Ser Val  
                   35                                  40                                  45

Phe Pro Arg Arg Val Leu Trp Leu Lys Cys Ile Thr Cys Lys Ile Glu  
                   50                                  55                                  60

<210> 5578

<211> 43

<212> PRT

<213> Homo sapiens

<220>

## 4919

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5578

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Xaa | Gln | Thr | Asn | Gly | Thr | Lys | Leu | Arg | Ser | Gln | Ile | Glu | Ile |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Gln | Ser | Val | Asp | Leu | Leu | Ile | Tyr | Gly | Asn | Val | Phe | Cys | Glu | Ile |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Gln | Leu | Met | Gly | Lys | Arg | Leu | Phe | Lys | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |

&lt;210&gt; 5579

&lt;211&gt; 143

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (69)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (70)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (118)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (123)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (127)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (129)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4920

<220>  
 <221> SITE  
 <222> (130)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (132)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (133)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (135)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (136)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (137)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5579  
 Thr Ser Gly Ile Gly Thr Ser Pro Ser Leu Arg Ser Leu Gln Ser Leu  
 1 5 10 15  
 Leu Gly Pro Ser Ser Lys Phe Arg His Ala Gln Gly Thr Val Leu His  
 20 25 30  
 Arg Asp Ser His Ile Thr Asn Leu Lys Gly Leu Asn Leu Thr Thr Pro  
 35 40 45  
 Gly Glu Ser Asp Gly Phe Cys Ala Asn Lys Leu Arg Val Ala Val Pro  
 50 55 60  
 Leu Leu Ser Ser Xaa Xaa Gln Val Ala Val Leu Glu Leu Arg Lys Pro  
 65 70 75 80  
 Gly Arg Leu Pro Asp Thr Ala Leu Pro Thr Leu Gln Asn Gly Ala Ala  
 85 90 95  
 Val Thr Asp Leu Ala Trp Asp Pro Phe Asp Pro His Arg Leu Ala Val  
 100 105 110

## 4921

Ala Gly Glu Asp Ala Xaa Ile Arg Leu Trp Xaa Val Pro Ala Xaa Gly  
 115 120 125

Xaa Xaa Arg Xaa Xaa His Xaa Xaa Xaa Asn Cys Ala Tyr Lys Ala  
 130 135 140

<210> 5580

<211> 67

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (33)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (44)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (61)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5580

Ser Asn Ser Leu Gln Val Trp Gly Trp Gln Ile Leu Ala Pro Leu Lys  
 1 5 10 15

Trp Ile Pro His Ala His Ala Ser Leu Phe Phe Ser Val Ala Arg Gly  
 20 25 30

Xaa Met Asp Lys Pro Lys Leu Gln Leu Lys Thr Xaa His Arg Pro Gly  
 35 40 45

Thr Val Thr His Ala Phe Asn Ile Ser Thr Leu Gly Xaa Gln Gly Gly  
 50 55 60

Arg Ile Thr  
 65

<210> 5581

<211> 66

<212> PRT

<213> Homo sapiens

## 4922

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5581

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Pro | Lys | Ala | Gln | Gln | Glu | Gln | Leu | Leu | Leu | Ile | Leu | Gln | Xaa |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Xaa | Pro | Arg | Pro | Ala | Phe | His | Pro | Lys | Pro | His | Leu | Val | Ser | Met |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ile | Ser | Thr | Val | Trp | Pro | Ser | Cys | Asp | Cys | Ser | Leu | Ala | Ala | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Val | Ile | Pro | His | Ser | Glu | Ser | Ser | Phe | Ser | Gly | Ser | Leu | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |
|-----|-----|
| Phe | Ser |
| 65  |     |

&lt;210&gt; 5582

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (33)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5582

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Ile | Ser | Asp | Ala | Leu | Arg | Phe | Leu | Arg | Ser | Glu | Met | Ile | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Ser | Leu | Val | Tyr | Trp | Tyr | Phe | Phe | Thr | Ser | Ser | Glu | Ile | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Met | Leu | Tyr | Val | Arg | Arg | Ala | Phe | Phe | Lys | Leu | Cys | Cys | Phe | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| His | Val | Tyr | Leu | Phe |
|     | 50  |     |     |     |

## 4923

&lt;210&gt; 5583

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5583

Gln Gly Lys Lys Ser Ala Val Cys Leu Val Phe Ile Phe Val Phe Thr  
1 5 10 15

Gln Val Gly Leu Leu Phe Glu Thr Phe Phe Leu Asn Lys Arg Ser Tyr  
20 25 30

Lys Val Phe Thr Phe Ser Pro Ser Lys Asn Pro Ile Phe Leu Glu Phe  
35 40 45

Gly Leu Ser Ile Ile Ser Gly Ile Lys Glu  
50 55

&lt;210&gt; 5584

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5584

Thr Thr Val Asn Ile His Val Gly Gly Gly Gly Arg Leu Arg Pro Ala  
1 5 10 15

Lys Ala Gln Val Arg Leu Asn His Pro Ala Leu Leu Ala Ser Thr Gln  
20 25 30

Glu Ser Met Gly Leu His Arg Ala Gln Gly Leu Leu Met Pro Pro Ser  
35 40 45

Thr Cys Glu Pro Gly His Glu Ala Ser Leu Lys Gln Gly Phe Gln Pro  
50 55 60

Asp Ala Ile Asp Pro Gln Asn Leu Thr Trp Lys Ser Arg His  
65 70 75

&lt;210&gt; 5585

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



## 4924

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (40)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5585

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Lys | Gln | Leu | Tyr | Phe | Phe | Ile | Gln | Ala | Cys | His | Cys | Glu | Pro |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Ile | Val | Ser | Glu | Leu | Phe | Val | Xaa | Pro | Glu | Phe | Cys | Leu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Phe | Gln | Leu | His | Ser | Xaa | Ser | Phe | Phe | Asn | Cys | Val | Gly | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Lys | Asn | Asn | Gly | Arg | Asn |
|     |     |     | 50  |     |     |

&lt;210&gt; 5586

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5586

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Ser | Phe | Ser | Ser | Leu | Leu | Pro | Leu | Ser | Pro | Arg | Trp | Lys | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Asn | Val | Glu | Thr | Pro | Glu | Gly | Val | Gln | Leu | Asp | Gln | Gly | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Arg | His | Leu | Thr | Val | Phe | Ser | Val | Cys | Pro | Ser | Leu | Tyr | Ser | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Arg | Asn | Gly | Ser | Val | Phe | Phe | Phe | Thr | Phe | Ile | Gly | Ser | Ser | Tyr |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Thr | Leu | Phe | Leu | Met | Cys | Ser | Phe | Phe | Asn | Trp | Leu | Val | Phe |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Tyr | Tyr | Leu | Gln | Leu | Tyr | Gly | Leu |
|     |     |     |     |     | 85  |     |     |     |

## 4925

&lt;210&gt; 5587

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5587

Gln Lys Asn Pro Leu Met Val Cys Phe Leu Tyr Trp Ala Thr Gln Trp

1

5

10

15

Cys Xaa Lys Val Tyr Met Lys Pro Gln Cys Lys Gln Gly Leu Ser Ser

20

25

30

Gln Asp Ile Asn Phe Asp Arg Lys Xaa Cys Val Phe Met Cys Val Cys

35

40

45

Val Ser Gly Cys Asn

50

&lt;210&gt; 5588

&lt;211&gt; 46

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5588

Phe Cys Lys Tyr Asn Asn Asn Ser Asn Asn Thr Ile Leu Ser Phe Lys

1

5

10

15

Lys Leu Pro Ile His Phe Ser Asn Leu Thr Val Ser Gly Gly Val Tyr

20

25

30

Val Cys Leu Cys Phe His Leu Cys Asn Gly Cys Leu Ile Ile

35

40

45

&lt;210&gt; 5589

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4926

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (32)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5589

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Leu | Thr | Met | Ala | Ser | Glu | His | Val | Lys | Cys | Thr | Tyr | Ile | Leu | Gln |
| 1   |     |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Lys | Thr | Val | Cys | Ile | Lys | Leu | Gln | Pro | Ser | Ile | Ile | Lys | Phe | Xaa |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gln | Phe | Gln | Asp | Gly | Asn | Gln | Gly | Phe | Phe | Phe | Arg | Asp | Val | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ser | Pro | Ser | Xaa | Ile | Ile | Leu | Asn | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |

&lt;210&gt; 5590

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (63)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (74)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5590

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Asn | Phe | Met | Asn | Met | Phe | Val | Lys | Leu | Leu | Phe | Tyr | Ile | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Gln | Ile | Glu | Lys | Phe | Ile | Ser | Ser | Leu | Leu | Tyr | Leu | Trp | Lys | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Pro | Phe | Tyr | Arg | Lys | Lys | Ser | Ser | Lys | Thr | Ile | Lys | Trp | Ile | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

Ala Cys Phe Val Ser His Cys Leu Gln Ile Leu Trp Leu Ser Xaa Gly  
50 55 60

His Arg Ala Leu Val Gly Cys Thr Gly Xaa Pro Ile Phe Pro  
65 70 75

<213> Homo sapiens

<223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

Xaa Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Xaa  
1 5 10 15

Thr Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg  
20 25 30

Gly Thr Ala Lys Val Tyr Gly Met Val Cys  
35 40

<213> Homo sapiens

<223> Xaa equals any of the naturally occurring L-amino acids

Pro Val Ala Ala Val Ser Gly Arg Ala Val Gly Gly Ser Arg Gly Gly  
1 5 10 15

Gly Arg Gly Gly Met Ala Ala Ala Ala Ala Gly Ala Gly Ser Gly Pro  
20 25 30

## 4928

Trp Ala Ala Gln Glu Lys Gln Phe Pro Pro Ala Leu Leu Ser Phe Phe  
 35 40 45  
 Ile Tyr Asn Pro Arg Phe Gly Pro Arg Glu Gly Gln Glu Glu Asn Lys  
 50 55 60  
 Ile Leu Phe Tyr His Pro Asn Glu Val Glu Lys Asn Glu Lys Ile Arg  
 65 70 75 80  
 Asn Val Gly Leu Cys Glu Ala Ile Val Gln Phe Thr Arg Thr Phe Ser  
 85 90 95  
 Pro Ser Lys Pro Ala Lys Ser Leu His Thr Gln Lys Asn Arg Gln Phe  
 100 105 110  
 Phe Asn Glu Pro Glu Glu Asn Phe Trp Met Val Met Val Val Arg Xaa  
 115 120 125  
 Pro Ile Ile Glu Lys Gln Ser Lys Asp Gly Lys Pro Val Ile Glu Tyr  
 130 135 140  
 Gln Glu Glu Glu Leu Leu Asp Lys Val Tyr Ser Ser Val Leu Arg Gln  
 145 150 155 160  
 Cys Tyr Ser Met Tyr Lys Leu Phe Asn Gly Thr Phe Leu Lys Ala Met  
 165 170 175  
 Glu Asp Gly Gly Val Lys Leu Leu Lys Glu Arg Leu Glu Lys Phe Phe  
 180 185 190  
 His Arg Tyr Leu Gln Thr Leu His Leu Gln Ser Cys Asp Leu Leu Asp  
 195 200 205  
 Ile Phe Gly Gly Ile Ser Phe Phe Pro Leu Asp Lys Met Thr Tyr Leu  
 210 215 220  
 Lys Ile Gln Ser Phe Ile Asn Arg Met Glu Glu Ser Leu Asn Ile Val  
 225 230 235 240  
 Lys Tyr Thr Ala Phe Leu Tyr Asn Asp Gln Leu Ile Trp Ser Gly Leu  
 245 250 255  
 Glu Gln Asp Asp Met Arg Ile Leu Tyr Lys Tyr Leu Thr Thr Ser Leu  
 260 265 270  
 Phe Pro Arg His Ile Glu Pro Glu Leu Ala Gly Arg Asp Ser Pro Ile  
 275 280 285  
 Arg Ala Glu Met Pro Gly Asn Leu Gln His Tyr Gly Arg Phe Leu Thr  
 290 295 300

## 4929

Gly Pro Leu Asn Leu Asn Asp Pro Asp Ala Lys Cys Arg Phe Pro Lys  
 305 310 315 320  
 Ile Phe Val Asn Thr Asp Asp Thr Tyr Glu Glu Leu His Leu Ile Val  
 325 330 335  
 Tyr Lys Ala Met Ser Ala Ala Val Cys Phe Met Ile Asp Ala Ser Val  
 340 345 350  
 His Pro Thr Leu Asp Phe Cys Arg Arg Leu Asp Ser Ile Val Gly Pro  
 355 360 365  
 Gln Leu Thr Val Leu Ala Ser Asp Ile Cys Glu Gln Phe Asn Ile Asn  
 370 375 380  
 Lys Arg Met Ser Gly Ser Glu Lys Glu Pro Gln Phe Lys Phe Ile Tyr  
 385 390 395 400  
 Phe Asn His Met Asn Leu Ala Glu Lys Ser Thr Val His Met Arg Lys  
 405 410 415  
 Thr Pro Ser Val Ser Leu Thr Ser Val His Pro Asp Leu Met Lys Ile  
 420 425 430  
 Leu Gly Asp Ile Asn Ser Asp Phe Thr Arg Val Asp Glu Asp Glu Glu  
 435 440 445  
 Ile Ile Val Lys Ala Met Ser Asp Tyr Trp Val Val Gly Lys Lys Ser  
 450 455 460  
 Asp Arg Arg Glu Leu Tyr Val Ile Leu Asn Gln Lys Asn Ala Asn Leu  
 465 470 475 480  
 Ile Glu Val Asn Glu Glu Val Lys Lys Leu Cys Ala Thr Gln Phe Asn  
 485 490 495  
 Asn Ile Phe Phe Leu Asp  
 500

&lt;210&gt; 5593

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (57)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4930

&lt;400&gt; 5593

```

Asn Pro Gly Ile Leu Ser Pro Ser Asn Leu Lys Val Phe Lys Leu Ile
 1              5              10              15

Leu Phe Tyr Val Phe Leu Ala Val Tyr Val Leu Leu Lys Ser Leu Ser
      20              25              30

Phe Cys Val Lys Ile Cys Leu Ser Leu Leu His Phe Thr Ala Ser Lys
      35              40              45

Ile Lys Asn Thr Tyr Ile Leu Leu Xaa Ile Asp Ala Ser Lys
      50              55              60

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&lt;210&gt; 5594

&lt;211&gt; 453

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (327)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5594

```

Ser Ile Phe Arg Val Ser Pro Gly Phe Arg Ile Ala Met Ile Ile Pro
 1              5              10              15

Ser Leu Glu Glu Leu Asp Ser Leu Lys Tyr Ser Asp Leu Gln Asn Leu
      20              25              30

Ala Lys Ser Leu Gly Leu Arg Ala Asn Leu Arg Ala Thr Lys Leu Leu
      35              40              45

Lys Ala Leu Lys Gly Tyr Ile Lys His Glu Ala Arg Lys Gly Asn Glu
      50              55              60

Asn Gln Asp Glu Ser Gln Thr Ser Ala Ser Ser Cys Asp Glu Thr Glu
      65              70              75              80

Ile Gln Ile Ser Asn Gln Glu Glu Ala Glu Arg Gln Pro Leu Gly His
      85              90              95

Val Thr Lys Thr Arg Arg Arg Cys Lys Thr Val Arg Val Asp Pro Asp
      100              105              110

Ser Gln Gln Asn His Ser Glu Ile Lys Ile Ser Asn Pro Thr Glu Phe
      115              120              125

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## 4931

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asn | His | Glu | Lys | Gln | Glu | Ser | Gln | Asp | Leu | Arg | Ala | Thr | Ala | Lys | 130 | 135 | 140 |     |
| Val | Pro | Ser | Pro | Pro | Asp | Glu | His | Gln | Glu | Ala | Glu | Asn | Ala | Val | Ser | 145 | 150 | 155 | 160 |
| Ser | Gly | Asn | Arg | Asp | Ser | Lys | Val | Pro | Ser | Glu | Gly | Lys | Lys | Ser | Leu | 165 | 170 | 175 |     |
| Tyr | Thr | Asp | Glu | Ser | Ser | Lys | Pro | Gly | Lys | Asn | Lys | Arg | Thr | Ala | Ile | 180 | 185 | 190 |     |
| Thr | Thr | Pro | Asn | Phe | Lys | Lys | Leu | His | Glu | Ala | His | Phe | Lys | Glu | Met | 195 | 200 | 205 |     |
| Glu | Ser | Ile | Asp | Gln | Tyr | Ile | Glu | Arg | Lys | Lys | Lys | His | Phe | Glu | Glu | 210 | 215 | 220 |     |
| His | Asn | Ser | Met | Asn | Glu | Leu | Lys | Gln | Gln | Pro | Ile | Asn | Lys | Gly | Gly | 225 | 230 | 235 | 240 |
| Val | Arg | Thr | Pro | Val | Pro | Pro | Arg | Gly | Arg | Leu | Ser | Val | Ala | Ser | Thr | 245 | 250 | 255 |     |
| Pro | Ile | Ser | Gln | Arg | Arg | Ser | Gln | Gly | Arg | Ser | Cys | Gly | Pro | Ala | Ser | 260 | 265 | 270 |     |
| Gln | Ser | Thr | Leu | Gly | Leu | Lys | Gly | Ser | Leu | Lys | Arg | Ser | Ala | Ile | Ser | 275 | 280 | 285 |     |
| Ala | Ala | Lys | Thr | Gly | Val | Arg | Phe | Ser | Ala | Ala | Thr | Lys | Asp | Asn | Glu | 290 | 295 | 300 |     |
| His | Lys | Arg | Ser | Leu | Thr | Lys | Thr | Pro | Ala | Arg | Lys | Ser | Ala | His | Val | 305 | 310 | 315 | 320 |
| Thr | Val | Ser | Gly | Gly | Thr | Xaa | Lys | Gly | Glu | Ala | Val | Leu | Gly | Thr | His | 325 | 330 | 335 |     |
| Lys | Leu | Lys | Thr | Ile | Thr | Gly | Asn | Ser | Ala | Ala | Val | Ile | Thr | Pro | Phe | 340 | 345 | 350 |     |
| Lys | Leu | Thr | Thr | Glu | Ala | Thr | Gln | Thr | Pro | Val | Ser | Asn | Lys | Lys | Pro | 355 | 360 | 365 |     |
| Val | Phe | Asp | Leu | Lys | Ala | Ser | Leu | Ser | Arg | Pro | Leu | Asn | Tyr | Glu | Pro | 370 | 375 | 380 |     |
| His | Lys | Gly | Lys | Leu | Lys | Pro | Trp | Gly | Gln | Ser | Lys | Glu | Asn | Asn | Tyr | 385 | 390 | 395 | 400 |



## 4932

Leu Asn Gln His Val Asn Arg Ile Asn Phe Tyr Lys Lys Thr Tyr Lys  
                     405                    410                    415

Gln Pro His Leu Gln Thr Lys Glu Glu Gln Arg Lys Lys Arg Glu Gln  
                     420                    425                    430

Glu Arg Lys Glu Lys Lys Ala Lys Val Leu Gly Met Arg Arg Gly Leu  
                     435                    440                    445

Ile Leu Ala Glu Asp  
                     450

<210> 5595

<211> 64

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (64)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5595

Leu Leu Lys Lys Lys Ser Gly Glu Glu Arg Tyr Leu Ser Asn Leu Leu  
     1                    5                    10                    15

Asn Leu Tyr Lys Thr Leu His Cys Arg Gly Gly Ala Thr Pro Lys Tyr  
                     20                    25                    30

Phe His Asp Leu His Gly Leu Ile Arg Phe Phe Phe Phe Tyr Thr Ile  
                     35                    40                    45

Leu Ala Thr Phe Ser Met Glu Lys Arg Gln Phe Thr Gln Phe Pro Xaa  
                     50                    55                    60

<210> 5596

<211> 307

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (147)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4933

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (300)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5596

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Thr | Lys | Lys | Met | Ser | Met | Leu | Lys | Pro | Ser | Gly | Leu | Lys | Ala | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Lys | Ile | Leu | Lys | Pro | Gly | Ser | Thr | Ala | Leu | Lys | Thr | Pro | Thr | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Val | Ala | Pro | Val | Glu | Lys | Thr | Ile | Ser | Ser | Glu | Lys | Ala | Ser | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Ser | Ser | Glu | Thr | Gln | Glu | Glu | Phe | Val | Asp | Asp | Phe | Arg | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Glu | Arg | Val | Trp | Val | Asn | Gly | Asn | Lys | Pro | Gly | Phe | Ile | Gln | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Glu | Thr | Gln | Phe | Ala | Pro | Gly | Gln | Trp | Ala | Gly | Ile | Val | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Glu | Pro | Ile | Gly | Lys | Asn | Asp | Gly | Ser | Val | Ala | Gly | Val | Arg | Tyr |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gln | Cys | Glu | Pro | Leu | Lys | Gly | Ile | Phe | Thr | Arg | Pro | Ser | Lys | Leu |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Lys | Val | Gln | Ala | Glu | Asp | Glu | Ala | Asn | Gly | Leu | Gln | Thr | Thr |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Xaa | Arg | Ala | Thr | Ser | Pro | Leu | Cys | Thr | Ser | Thr | Ala | Ser | Met |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Ser | Ser | Pro | Ser | Thr | Pro | Ser | Asn | Ile | Pro | Gln | Lys | Pro | Ser |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Pro | Ala | Ala | Lys | Glu | Pro | Ser | Ala | Thr | Pro | Pro | Ile | Ser | Asn | Leu |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Lys | Thr | Ala | Ser | Glu | Ser | Ile | Ser | Asn | Leu | Ser | Glu | Ala | Gly | Ser |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Lys | Lys | Gly | Glu | Arg | Glu | Leu | Lys | Ile | Gly | Asp | Arg | Val | Leu | Val |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Thr | Lys | Ala | Gly | Val | Val | Arg | Phe | Leu | Gly | Glu | Thr | Asp | Phe |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

4934

Ala Lys Gly Glu Trp Cys Gly Val Glu Leu Asp Glu Pro Leu Gly Lys  
245 250 255

Asn Asp Gly Ala Val Ala Gly Thr Arg Tyr Phe Gln Cys Gln Pro Lys  
260 265 270

Tyr Gly Leu Phe Ala Pro Val His Lys Val Thr Lys Ile Gly Phe Pro  
275 280 285

Ser Thr Thr Pro Ala Lys Ala Lys Ala Asn Ala Xaa Gly Glu Leu Trp  
290 295 300

Arg Pro Arg  
305

<210> 5597

<211> 118

&lt;212&gt; PRT

<213> Homo sapiens

<400> 5597

Asn Gly Gly Gly Gln His Cys Cys Trp Arg Asn Arg Met Pro His Pro  
1 5 10 15

Trp Trp Val Leu His Thr Val Ser Gly Gly Gln Val Ser Cys Gln Pro  
20 25 30

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Arg | Asn | Ser | Pro | Pro | Ser | Glu | Ala | Thr | Lys | Thr | Ser | Arg | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

Ser Gln Ser Ala Ile Leu Arg Lys Val Leu Arg Gly Thr Asp Lys Val  
50 55 60

Arg Arg Glu Ser Cys Gly Leu Glu Ala Ala Arg Asn Lys Pro Ser Arg  
65 70 75 80

Arg Arg Gly Ile Pro Ala Gly Gly Met Gly Gly Ala Gly Ala Trp Glu  
85 90 95

Met Arg Thr Gly Leu Val Met Val Cys Gly Arg Gln Leu Leu Arg Trp  
100 105 110

Arg Ala Gly Gly Arg Gly  
115

<210> 5598

## 4935

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5598

Gln Tyr Phe Leu Lys Ile Ile Thr Tyr Ile Ile Val Thr Lys His Leu  
1 5 10 15

Cys Gln Ile Arg Thr Ser Ser Thr Glu Ala Ala Val  
20 25

&lt;210&gt; 5599

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5599

Lys Phe Trp Arg Leu Gly Xaa Leu Arg Ser Arg Ser Gln Gln Val Trp  
1 5 10 15

Cys Leu Ala Arg Ala His Ser Ser Leu Pro Ser Cys Cys Val Thr Ala  
20 25 30

Trp Trp Glu Gly Gln Ala Ser Ser His Gly Leu Phe Tyr Ser Gly Pro  
35 40 45

Xaa Ser Ile Gly Glu Gly Ser Ala Ile Ile Thr Ser Ser Pro Arg His  
50 55 60

Leu Gln Gly  
65

&lt;210&gt; 5600

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4936

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5600

Xaa Ser Val His Thr Leu Tyr Arg Asn Ser Leu Tyr Ser Ile Pro Val  
1 5 10 15

Glu Gly His Phe Asn Pro His Ser Ile Pro Ser Val Leu Arg Thr Ser  
20 25 30

Ser Lys Ala Ala Cys Ser Ser Ser Ser Val Val Ala Thr Leu Asp Leu  
35 40 45

His Val  
50

&lt;210&gt; 5601

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5601

Gly Asp Cys Gly Lys Gly Thr Val Tyr Lys Ala Val Gly Met Tyr Arg  
1 5 10 15

Lys Ala Gln Gly Ile Gly Gln Gly Ala Gly Leu Phe Ile Val Ile Phe  
20 25 30

Thr Ser Gly Leu Ile Leu Gly Gly Gly Gly Val Leu Pro Gly Thr Arg  
35 40 45

Pro Tyr Gly  
50

&lt;210&gt; 5602

&lt;211&gt; 143

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (123)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4937

&lt;221&gt; SITE

&lt;222&gt; (135)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5602

Lys Gln Phe Ala Ser Gly Asn Arg Thr Ala Gly Ala Val Phe Leu Gln  
 1 5 10 15

Gln Gln Thr Lys His Arg Gly Arg Thr Gln Ala Ser Thr Glu Gln Ala  
 20 25 30

Glu Thr Asp Asp Asn Met Asp Thr Lys Ser Ile Leu Glu Glu Leu Leu  
 35 40 45

Leu Lys Arg Ser Gln Leu Leu Glu Met Cys Tyr Asp Val Cys Glu Gly  
 50 55 60

Met Ala Phe Leu Glu Ser His Gln Phe Ile His Arg Asp Leu Ala Ala  
 65 70 75 80

Arg Asn Cys Leu Val Asp Arg Asp Leu Cys Val Lys Val Ser Asp Phe  
 85 90 95

Gly Met Thr Arg Tyr Val Leu Asp Asp Gln Tyr Val Ser Ser Val Gly  
 100 105 110

Thr Lys Phe Pro Val Lys Trp Ser Ala Pro Xaa Val Phe His Tyr Phe  
 115 120 125

Lys Tyr Ser Ser Lys Ser Xaa Arg Met Gly Ile Trp Asp Pro Asp  
 130 135 140

&lt;210&gt; 5603

&lt;211&gt; 43

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5603

Asn Phe Val Phe Leu Val Glu Lys Gly Phe Leu His Val Gly Gln Xaa  
 1 5 10 15

Gly Leu Glu Leu Pro Ile Ser Gly Asp Pro Pro Ala Ser Gln Ser Ala  
 20 25 30

## 4938

Gly Ile Thr Gly Val Ser Thr Thr Pro Arg Leu  
           35                                  40

<210> 5604

<211> 83

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (11)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (80)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5604

Val Gly Val Ser Ser Gln Leu Lys Lys Lys Xaa Asn Glu Ile Gly Ser  
   1                          5                          10                          15

Arg Asn Glu Lys Gly Glu Arg Glu Arg Lys Lys Lys Met Asp Val Gly  
                           20                          25                          30

Asn Phe Val Ala Cys Ser Leu Trp Ile Leu Gln Asn Tyr His Cys Gly  
           35                          40                          45

Tyr Cys Leu Thr Trp Leu Leu Leu Ala Met Lys Asn Gln Glu His Phe  
       50                          55                          60

His Tyr His Phe Leu Thr Ile His Gln Pro Gln Phe Leu Gly Ile Xaa  
   65                          70                          75                          80

Leu Lys Phe

<210> 5605

<211> 429

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (28)

<223> Xaa equals any of the naturally occurring L-amino acids

## 4939

&lt;400&gt; 5605

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Gln | Ala | Thr | Asp | Val | Glu | Val | Gly | Thr | Asp | Leu | Val | Pro | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Thr | Val | Lys | Val | Thr | Leu | Gln | Asn | Arg | Val | Xaa | Leu | Gln | Lys | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Leu | Ser | Val | Tyr | Val | Gln | Pro | Pro | Leu | Glu | Leu | Thr | Cys | Asp | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Thr | Phe | Glu | Phe | Met | Asn | Arg | Asn | Pro | Asp | Gly | Ile | Pro | Arg | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Gln | Cys | Lys | Phe | Arg | Leu | Pro | Leu | Lys | Leu | Ile | Cys | Leu | Pro | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Gln | Pro | Ser | Lys | Thr | Ala | Ser | His | Lys | Ile | Thr | Ile | Asp | Thr | Asn | Lys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Pro | Val | Ser | Leu | Leu | Ser | Leu | Phe | Pro | Gly | Phe | Ala | Ser | Gln | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Asp | Asp | Gln | Val | Asn | Val | Met | Gly | Phe | His | Phe | Leu | Gly | Gly | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Ile | Thr | Val | Leu | Ala | Ser | Lys | Thr | Ser | Gln | Arg | Tyr | Arg | Ile | Gln |
|     | 130 |     |     |     |     |     | 135 |     |     |     | 140 |     |     |     |     |
| Ser | Glu | Gln | Phe | Glu | Asp | Leu | Trp | Leu | Ile | Thr | Asn | Glu | Leu | Ile | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Arg | Leu | Gln | Glu | Tyr | Phe | Glu | Lys | Gln | Gly | Val | Lys | Asp | Phe | Ala | Cys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ser | Phe | Ser | Gly | Ser | Ile | Pro | Leu | Gln | Glu | Tyr | Phe | Glu | Leu | Ile | Asp |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| His | His | Phe | Glu | Leu | Arg | Ile | Asn | Gly | Glu | Lys | Leu | Glu | Glu | Leu | Leu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ser | Glu | Arg | Ala | Val | Gln | Phe | Arg | Ala | Ile | Gln | Arg | Arg | Leu | Leu | Ala |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Arg | Phe | Lys | Asp | Lys | Thr | Pro | Ala | Pro | Leu | Gln | His | Leu | Asp | Thr | Leu |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Leu | Asp | Gly | Thr | Tyr | Lys | Gln | Val | Ile | Ala | Leu | Ala | Asp | Ala | Val | Glu |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Glu | Asn | Gln | Gly | Asn | Leu | Phe | Gln | Ser | Phe | Thr | Arg | Leu | Lys | Ser | Ala |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |



## 4940

Thr His Leu Val Ile Leu Leu Ile Ala Leu Trp Gln Lys Leu Ser Ala  
 275 280 285  
 Asp Gln Val Ala Ile Leu Glu Ala Ala Phe Leu Pro Leu Gln Glu Asp  
 290 295 300  
 Thr Gln Glu Leu Gly Trp Glu Glu Thr Val Asp Ala Ala Ile Ser His  
 305 310 315 320  
 Leu Leu Lys Thr Cys Leu Ser Lys Ser Ser Lys Glu Gln Ala Leu Asn  
 325 330 335  
 Leu Asn Ser Gln Leu Asn Ile Pro Lys Asp Thr Ser Gln Leu Lys Lys  
 340 345 350  
 His Ile Thr Leu Leu Cys Asp Arg Leu Ser Lys Gly Gly Arg Leu Cys  
 355 360 365  
 Leu Ser Thr Asp Ala Ala Ala Pro Gln Thr Met Val Met Pro Gly Gly  
 370 375 380  
 Cys Thr Thr Ile Pro Glu Ser Asp Leu Glu Glu Arg Ser Val Glu Gln  
 385 390 395 400  
 Asp Ser Thr Glu Leu Phe Thr Asn His Arg His Leu Thr Ala Glu Thr  
 405 410 415  
 Pro Arg Pro Glu Val Ser Pro Leu Gln Gly Val Ser Glu  
 420 425

&lt;210&gt; 5606

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5606

Asn Ile Thr Thr Met Asn Pro Thr Ser His Cys Lys Asp Cys Val Leu  
 1 5 10 15

Tyr Phe Asp Leu Ser Ser Gly Ile Gly Asp Thr Leu Phe Gly His His  
 20 25 30

Glu Gly Thr Met Gln Asn Pro Ser Phe Xaa Asn Ser Phe Leu Ser Ser

## 4941

35

40

45

Ile Glu Asp Pro Lys Asn Gln Thr Phe Arg Val  
 50 55

&lt;210&gt; 5607

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (96)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5607

Lys Pro Gly His Thr Ala Gly Asp Glu Trp Lys Ala Ser Glu Thr Ser  
 1 5 10 15

Trp Val Phe Thr Ala Ile Pro Arg Arg Ser His Tyr His Leu Ser Cys  
 20 25 30

Val Ser Cys Glu Ile Ser Ser Ser Ile Arg Phe Ser Arg Ser Thr Asn  
 35 40 45

Pro Phe Gly Thr Val Cys Glu Gly Ser Lys Leu Arg Ile Ser Tyr Glu  
 50 55 60

Asn Leu Ile Pro Asp Asp Leu Leu Leu Ser Pro Thr Thr Pro Arg Trp  
 65 70 75 80

Asp His Leu Val Ala Gly Lys Gln Ala Gln Ala Pro Thr Asp Ser Xaa  
 85 90 95

Leu

&lt;210&gt; 5608

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5608

Gln Arg Lys Arg Glu Glu Gly Arg Leu Asp Thr Glu Arg Cys Leu  
 1 5 10 15

Ala Arg Gly Ser Gln Ser Gly Val Gln Pro Leu Gly Gly Pro Thr Pro

## 4942

20 25 30  
 Gly Glu Asp His Leu Pro Thr Ser Ser Ile Pro Thr Leu Pro Ala Pro  
 35 40 45  
 His Pro Ser Cys  
 50

&lt;210&gt; 5609

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5609

Ala Xaa Thr Asn Phe Thr Gln Glu Xaa Ala Met Thr Met Ile Thr Pro  
 1 5 10 15

Ser Ser Asn Thr Thr His Tyr Arg Glu Ser Trp Tyr Ala Cys Arg Tyr  
 20 25 30

Arg Ser Gly Ile Pro Gly Ser Thr His Ala Ser Gly Arg Gln Arg Leu  
 35 40 45

Gln

&lt;210&gt; 5610

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (21)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 4943

<221> SITE  
<222> (22)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (31)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5610  
Leu Ala Lys Glu Val Lys Pro Arg Gly Phe Pro Gly Gly Lys Ile Phe  
1 5 10 15  
Pro Pro Gly Gly Xaa Xaa Gly Asn Pro Pro Thr Gly Pro Val Xaa Pro  
20 25 30  
Gly Val Pro Lys Phe Lys Thr Pro Lys Phe  
35 40

<210> 5611  
<211> 85  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (46)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (55)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (63)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (80)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5611  
His Ala Gln Gly Glu Ala Arg Val Gln Pro Leu Arg Gly Leu Leu Gln  
1 5 10 15  
Glu Arg Gly Gly Gln Gln Pro Trp Gly Arg Gly Arg Pro Arg Gly Gly

## 4944

20 25 30  
 Gly His Gln Gly Thr Ala Arg Trp Ala Ser Ser Cys Pro Xaa Ser Trp  
 35 40 45  
 Ala Arg Ser Lys Ala Arg Xaa Asp Leu Leu Ala Trp Gln Pro Xaa Pro  
 50 55 60  
 Gly Ala Arg Ile Ala Ala Pro Val Ile Gln Asn Pro Ala Glu Gln Xaa  
 65 70 75 80  
 Pro Cys Ser Cys Ala  
 85

&lt;210&gt; 5612

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (51)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (56)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (91)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5612

Thr Lys Phe His Phe Val Cys Val Cys Val His Val Cys Val Ser Thr  
 1 5 10 15

Gly Gly Leu Cys Phe Ile Leu Cys Phe Phe Asp Ser Cys Ala Thr Ser  
 20 25 30

Leu Pro His Ser Pro Lys Lys Asp Lys Thr Lys Leu Ser Thr Asn Pro  
 35 40 45

His Ile Xaa Val Cys Leu Ser Xaa Thr Leu Thr Thr Val Pro Ile Ile  
 50 55 60

Met Ser Ser Tyr Ile Pro Cys Lys Ile Trp Val Val Ser Tyr Thr Ala  
 65 70 75 80

## 4945

Gly Leu His Leu Thr Leu Glu Gly Lys Lys Xaa  
                             85                            90

<210> 5613

<211> 79

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (15)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (34)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (50)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (56)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (61)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5613

Asn Ser Glu Lys Glu Gln Trp Leu Cys Ser Phe Leu Ala Asn Xaa Leu  
   1                  5                  10                  15

Gln Lys Glu Ser Thr Trp Thr Ser Val Pro Gly Val Glu Ile Leu Arg  
                   20                  25                  30

Gly Xaa Glu Leu Val Gly Glu His Phe Pro Thr Trp Leu Arg Gln Gly  
           35                  40                  45

Phe Xaa Trp Gly Arg Gly Arg Xaa Tyr Ser Gly Gly Xaa Ser Pro Pro  
       50                  55                  60

Arg Arg His His Thr Phe Pro Pro Gly Val Pro Gln Gly Pro Arg  
   65                  70                  75

4946

&lt;210&gt; 5614

&lt;211&gt; 219

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (215)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5614

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Phe | Phe | Ser | Leu | Thr | Ala | Ser | Tyr | Ser | Pro | Ile | Gln | Pro | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Ile | Lys | His | Gln | Gln | Ile | Pro | Leu | His | Ser | Pro | Pro | Ser | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | His | His | Gln | Leu | Ile | Leu | Gln | Gln | Gln | Gln | Gln | Gln | Ile | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ile | Thr | Leu | Gln | Asn | Ser | Thr | Gln | Asp | Pro | Pro | Pro | Ser | Gln | His |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ile | Pro | Leu | Gln | Asn | His | Gly | Leu | Pro | Pro | Ala | Pro | Ser | Asn | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ser | Gln | His | Cys | Ser | Pro | Ile | Gln | Ser | His | Pro | Ser | Pro | Leu | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Pro | Asn | Gln | Ser | Gln | Ser | Ala | Gln | Gln | Ser | Val | Val | Val | Ser |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Pro | Pro | His | Ser | Pro | Ser | Gln | Ser | Pro | Thr | Ile | Ile | Ile | His |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Ala | Leu | Ile | Gln | Pro | His | Pro | Leu | Val | Ser | Ser | Ala | Leu | Gln |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Pro | Asn | Leu | Gln | Gln | Ser | Thr | Ala | Asn | Gln | Val | Gln | Ala | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gln | Leu | Asn | Leu | Pro | Ser | His | Leu | Pro | Leu | Pro | Ala | Ser | Pro | Val |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | His | Ile | Gly | Pro | Val | Gln | Gln | Ser | Ala | Leu | Val | Ser | Pro | Gly | Gln |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ile | Val | Ser | Pro | Ser | His | Gln | Gln | Tyr | Ser | Ser | Leu | Gln | Ser | Ser |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4947

195                                      200                                      205  
 Pro Ile Pro Ile Ala Ser Xaa Pro Gln Met Ser  
     210                                      215

<210> 5615  
 <211> 26  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (6)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (26)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5615  
 Pro Ser Arg Leu Leu Xaa Pro Leu Ile Arg Val Ser Ile Lys Leu Lys  
     1                                      5                                      10                                      15

Leu Arg Pro Asp Arg Arg Thr Ala Ser Xaa  
                     20                                      25

<210> 5616  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

<400> 5616  
 Tyr Arg Ala Thr Phe Leu Asn Val Ser Asp Val Val Arg Pro Ser His  
     1                                      5                                      10                                      15

Thr Ser Ala Val Ser Phe Ser Ala Ser Leu Gly Leu Ala Phe Cys Ser  
                     20                                      25                                      30

Ser Val Pro His Thr Met Ile Pro Leu Gly Gln Ala Phe Ala Cys Ala  
                     35                                      40                                      45

Val Ser Pro Val Lys Leu Thr Ser Leu Pro Leu Trp Ala Gln Ile Pro  
                     50                                      55                                      60

Ala Gln Val Ala Gly Val Arg Ser Ser Arg Gly Gly Glu Ser Ser Trp  
     65                                      70                                      75                                      80



4948

Arg Ala Gly Ser Ile Val Arg Arg Lys Gly His Gly Gln Asn Pro Gly  
85 90 95

Glu His Arg

<210> 5617

<211> 67

<212> PRT

<213> Homo sapiens

<400> 5617

Gln Val Leu Cys Lys Cys Leu Pro Ser Leu Gln Val Pro Ala Thr Cys  
1 5 10 15

Pro Lys Lys Arg His Ile Lys Lys Leu Ser Asp Thr Ser Pro Asp Phe  
20 25 30

Ile Tyr Phe Ile Tyr Leu Thr Thr Tyr Met Leu Val Cys Arg Asn Tyr  
35 40 45

Ile Leu Asp Leu Phe Pro Tyr Leu Leu Arg Thr Val Leu Leu Leu Lys  
50 55 60

Ala Ala Thr  
65

<210> 5618

<211> 81

<212> PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

<222> (13.)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

&lt;221&gt; SITE

<222> (24)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5618

Ser Cys Gln Val Ser Pro Ala Gly Arg Lys His Cys Xaa Pro Ser Ala  
1 5 10 15

## 4949

Gly Ser Ser Leu Glu Ser Gln Xaa Gly Lys Arg Ser Trp Pro Leu Pro  
                   20                  25                  30  
 Pro Ala Asp Arg Ser Ser Ala Ser Met Arg Phe Val Val Val Thr Phe  
                   35                  40                  45  
 Ser Val Thr Ile Lys Gly Asp Phe Phe Leu Asn Ile Lys Leu Phe Phe  
                   50                  55                  60  
 Glu Gln Gly Met Asn Met Ser Phe Cys Asn Val Thr Glu Val Glu Phe  
                   65                  70                  75                  80  
 Lys

<210> 5619  
 <211> 48  
 <212> PRT  
 <213> Homo sapiens

<400> 5619  
 Ala Leu Leu Val His Glu Asp Lys Leu Pro Glu Gly Phe Gly Cys Met  
   1                  5                  10                  15  
 Leu His Ser Val Thr Ser Ser Tyr Leu Lys Ile Ser Val Leu Tyr Leu  
                   20                  25                  30  
 Ala Leu Tyr Leu Lys Val Asn Thr Asn Leu Thr Tyr Leu Lys Ile Phe  
                   35                  40                  45

<210> 5620  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 5620  
 Cys Leu Ser Pro Gly Thr Trp Ala Asp Leu Val Pro Gly Glu Leu Ser  
   1                  5                  10                  15  
 Pro Leu Leu Ala Lys Glu Leu Leu Ser Ser Gln Thr Leu Leu Leu Arg  
                   20                  25                  30  
 Cys Pro Pro Cys Met Val Phe Glu Val Phe Glu Val Phe Leu Glu Phe  
                   35                  40                  45

## 4950

Thr Cys Trp Arg Leu Gln Leu Thr Glu Arg Pro Gly Leu Asp Cys Ala  
 50 55 60

Ser Cys Ser Ser Arg Thr Lys Asp Ile Ser Trp Lys Cys Met Arg Pro  
 65 70 75 80

Arg Ile Cys Asp Arg Asn Gly Ser Ser His Val Arg Tyr Ala Pro Trp  
 85 90 95

Lys Asp Leu Glu Ile Arg Asn Leu Ser Glu His  
 100 105

<210> 5621  
 <211> 52  
 <212> PRT  
 <213> Homo sapiens

<400> 5621  
 Phe Tyr Val Arg Tyr Tyr Arg Tyr Phe Glu Met Val Thr Asp Ser Phe  
 1 5 10 15

Glu Ile Leu Ser Ser Leu Glu Cys Asp Ala Phe Asn Ile Ala Ser Gly  
 20 25 30

Phe Arg Trp Arg Asn Thr Met Leu Leu Ser Leu Lys Ile Asn Ser Ile  
 35 40 45

Ser Pro Ile Val  
 50

<210> 5622  
 <211> 44  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (38)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5622  
 Ser Ser Cys Met Asn Gln Gly Ser His Ser Gly Phe Gln Gly Leu Asp  
 1 5 10 15

Phe Leu Val Cys Lys Arg Asp Phe Thr Met His Leu Ala Thr Ser Pro  
 20 25 30

## 4951

Ser Ser Leu Gly Asn Xaa Lys Thr Lys Cys Arg Gln  
           35                                  40

<210> 5623

<211> 101

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (62)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (83)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5623

Gln Gly Asn Pro Lys Leu Gln Lys Leu Lys Gly Gly Glu Glu Gly Pro  
   1                  5                  10                  15

Val Leu Met Ala Glu Ala Val Lys Lys Val Asn Arg Gly Asn Gly Lys  
                   20                  25                  30

Thr Ser Ser Arg Ile Leu Leu Leu Thr Lys Gly His Val Ile Leu Thr  
           35                                  40                  45

Asp Thr Lys Lys Ser Gln Ala Lys Ile Val Ile Gly Leu Xaa Asn Val  
       50                  55                  60

Ala Gly Val Ser Val Thr Ser Leu Lys Asp Gly Leu Phe Ser Leu His  
   65                  70                  75                  80

Leu Ser Xaa Met Ser Ser Val Gly Ser Lys Gly Asp Phe Leu Leu Val  
                   85                  90                  95

Lys Arg Ala Cys Asp  
           100

<210> 5624

<211> 73

<212> PRT

<213> Homo sapiens

<400> 5624

## 4952

Asn Arg Ser Val Gln Ser Tyr Phe Phe Leu Thr Leu Asn Phe Pro Ser  
 1 5 10 15  
 Arg Glu Tyr Thr Ile Trp Leu Arg Gly Arg Gly Ser Pro Glu Glu Arg  
 20 25 30  
 Gly Phe Ala Leu Arg Gly Arg Ala Ser Leu Asp Phe Ala Ala Ser Asn  
 35 40 45  
 Phe Ser Arg Gly Val Glu Gly Gly Ala Leu Gly Gly Pro His Ser Leu  
 50 55 60  
 Ser Gly Val Pro Ala Arg Val Ser Phe  
 65 70

&lt;210&gt; 5625

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (59)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5625

Ser Cys Glu Asp Gly Lys Val Glu Gln Glu Ala Leu Ser Ala Phe Leu  
 1 5 10 15  
 His Asp Val Asn Glu Glu Ile Gln Cys Gln Ile Glu Val Asp Gly Thr  
 20 25 30  
 Pro Arg Gly Arg Gly Ala Gly Val Gly Ser Asp Val Pro Ser Pro Pro  
 35 40 45  
 Ser Pro Gly Pro Thr Asp Cys Gly His Glu Xaa Ala Gly Trp Cys Tyr  
 50 55 60  
 Asp Ser Arg Leu Gln His Arg Ala Leu Pro Ser Ser Pro Gln Trp Asp  
 65 70 75 80  
 Ile Lys Thr Thr Leu Gly Pro Phe Val Gln Gly Thr Thr Ser Ser Ile  
 85 90 95  
 Asp Gly Glu Asn Lys Leu Ser Arg Ala Thr Thr Gly Trp Arg Glu Ala  
 100 105 110  
 Gly Thr Ile Val Phe Leu Arg Ser Val Thr Ala Asp Pro Thr Asp His  
 115 120 125

## 4953

Ala Cys Trp Tyr Thr Leu Val Pro Asp Pro Ala Cys Arg Thr Ser Ala  
130 135 140

Val Cys  
145

<210> 5626

<211> 59

<212> PRT

<213> Homo sapiens

<400> 5626

Gly Gly Asn Ser Gly Asn Gly Pro Ala Lys Ile Tyr Gly Ala Ala Ala  
1 5 10 15

Ala Asp Asp Thr Ala Asn Ile Thr Gln Gln Pro Asp Ala Asn Val Asp  
20 25 30

Ile Asp Trp Gln Gly Gln Ala Phe Arg Gly Asn Asn Gln Gln Val Leu  
35 40 45

Leu Glu Gln Leu Glu Asn Gln Gly Ile Arg Ile  
50 55

<210> 5627

<211> 48

<212> PRT

<213> Homo sapiens

<400> 5627

Lys Ala Lys Gln Cys Lys Asn Pro Leu Gln Lys Ala Arg Leu Pro Pro  
1 5 10 15

Ser Thr Glu Pro Gln Leu Leu Cys Ser Pro Leu Gln Arg Gln Trp Leu  
20 25 30

Leu Leu Val Thr Cys Ile Ser Cys Trp Ile Cys Val Phe Tyr Gln Gly  
35 40 45

<210> 5628

<211> 39

## 4954

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5628

Asp Ser Val Leu Ser Leu Ile Ser His Asn Gln Leu Phe Leu Leu Val  
 1 5 10 15

Pro Asn Ser Cys Ser Pro Gly Asp Pro Leu Val Leu Glu Arg Pro Pro  
 20 25 30

Pro Arg Trp Ser Ser Ser Phe  
 35

&lt;210&gt; 5629

&lt;211&gt; 26

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5629

Trp His Met Pro Val Ile Pro Ala Leu Trp Glu Ser Glu Ala Gly Gly  
 1 5 10 15

Ser Leu Glu Ser Arg Ser Leu Arg Leu Pro  
 20 25

&lt;210&gt; 5630

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5630

Ile Ala Asn Ser Lys Gly Cys Thr Ser Val Ile Ile Asn Lys Asn Leu  
 1 5 10 15

Ala Asn Ser Cys Gly Thr Gly Tyr Ser His Leu Ile Cys Leu Val Pro  
 20 25 30

Lys Ile Ala Cys Pro Phe Pro Asn Ser Ser Gln Leu Asp Cys Ala Thr  
 35 40 45

Lys Thr Asp Lys Tyr Leu Leu Gly Asn His Asn His Gly Asp Leu Leu  
 50 55 60

Pro Gln Leu Gly Pro Trp Tyr Ile Phe Val Cys Ile Leu Trp Cys Tyr  
 65 70 75 80

Met Gln Ile Asn Thr Phe Asn

## 4955

85

&lt;210&gt; 5631

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (87)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5631

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Glu | Thr | Ser | Lys | Met | Glu | Thr | Leu | Ser | Phe | Pro | Arg | Tyr | Asn | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Glu | Ile | Val | Ile | His | Ile | Arg | Asn | Lys | Ile | Leu | Thr | Gly | Ala | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Lys | Asn | Leu | Thr | Lys | Asn | Asp | Leu | Tyr | Pro | Asn | Pro | Lys | Pro | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | His | Met | Ile | Tyr | Met | Arg | Ala | Leu | Gln | Ile | Val | Tyr | Gly | Ile |
|     | 50  |     |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Glu | His | Phe | Tyr | Met | Met | Pro | Val | Asn | Ser | Glu | Val | Met | Tyr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | His | Leu | Met | Gly | Arg | Xaa | Leu | Thr | Ile | Gln | Ala | Ile |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |

&lt;210&gt; 5632

&lt;211&gt; 114

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (97)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (98)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;



## 4956

<221> SITE  
 <222> (99)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (102)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (104)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (111)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5632  
 Thr Val Leu Gly His Val Leu Tyr Leu Cys Leu Ala Pro His Leu Phe  
   1                  5                  10                  15  
 Leu Asp Pro Leu Val Ile Cys Met Thr Thr Phe Lys Asn Phe Asn Phe  
                   20                  25                  30  
 Val Cys Cys Leu Arg His Cys Cys Glu His Pro His Gly Val Arg His  
           35                  40                  45  
 Pro Pro Thr Leu Ala Pro Ala Ser Thr Leu Leu His Leu Thr Ser Val  
       50                  55                  60  
 Tyr Pro Ala Ala Leu Leu Leu Leu Val Cys Val Asn Glu Asp Asn  
   65                  70                  75                  80  
 Leu Val Ala Val Thr Tyr Lys Cys Phe Ile Trp His His Pro Ser Val  
                   85                  90                  95  
 Xaa Xaa Xaa Trp Trp Xaa Glu Xaa Thr Leu Ala Pro Thr Pro Xaa His  
           100                  105                  110  
  
 Thr Ser

<210> 5633  
 <211> 210  
 <212> PRT  
 <213> Homo sapiens

## 4957

<220>  
 <221> SITE  
 <222> (145)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (159)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (165)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (179)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (182)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (183)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (187)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (190)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5633  
 Lys Glu Asn Lys Val Val Leu Ile Val Gly Glu Thr Gly Ser Gly Lys  
     1                    5                    10                    15  
 Thr Thr Gln Ile Pro Gln Phe Leu Leu Asp Asp Cys Phe Lys Asn Gly  
                     20                    25                    30  
 Ile Pro Cys Arg Ile Phe Cys Thr Gln Pro Arg Arg Leu Ala Ala Ile  
                     35                    40                    45

Ala Val Ala Glu Arg Val Ala Ala Glu Arg Arg Glu Arg Ile Gly Gln

## 4958

|   |     |         |
|---|-----|---------|
| 50  | 55  | 60      |
| Thr Ile Gly Tyr Gln Ile Arg Leu Glu Ser Arg Val Ser Pro Lys Thr |     |         |
| 65  | 70  | 75 80   |
| Leu Leu Thr Phe Cys Thr Asn Gly Val Leu Leu Arg Thr Leu Met Ala |     |         |
|   | 85  | 90 95   |
| Gly Asp Ser Thr Leu Ser Thr Val Thr His Val Ile Val Asp Glu Val |     |         |
|   | 100 | 105 110 |
| His Glu Arg Asp Arg Phe Ser Asp Phe Leu Leu Thr Lys Leu Arg Asp |     |         |
|   | 115 | 120 125 |
| Leu Leu Gln Lys His Pro Thr Leu Lys Leu Ile Leu Ser Ser Ala Ala |     |         |
|   | 130 | 135 140 |
| Xaa Asp Val Asn Leu Phe Ile Arg Tyr Phe Gly Ser Cys Pro Xaa Ile |     |         |
| 145   | 150 | 155 160 |
| Tyr Ile Gln Gly Xaa Pro Phe Glu Val Lys Glu Met Phe Leu Glu Asp |     |         |
|   | 165 | 170 175 |
| Ile Leu Xaa Thr Thr Xaa Xaa Thr Asn Lys Xaa Met Leu Xaa Tyr Lys |     |         |
|   | 180 | 185 190 |
| Lys Glu Lys Gln Gln Asp Glu Lys Thr Leu Ser Lys Lys Lys Lys Lys |     |         |
|   | 195 | 200 205 |
| Lys Lys   |     |         |
| 210   |     |         |

&lt;210&gt; 5634

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 4959

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5634

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Val | Arg | Tyr | Ile | Ala | Xaa | Xaa | Ser | Ala | Ala | Xaa | Arg | Lys | Arg | Xaa |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Cys | Ser | Glu | Trp | Lys | Phe | Ala | Ala | Cys | Val | Val | Asp | Arg | Leu | Cys |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Met | Ala | Phe | Ser | Val | Phe | Thr | Ile | Ile | Cys | Thr | Ile | Gly | Ile | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Ala | Pro | Asn | Phe | Val | Glu | Ala | Val | Ser | Lys | Asp | Phe | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |

&lt;210&gt; 5635

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5635

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Thr | Leu | Asp | Cys | Ser | Leu | Thr | Glu | Cys | Leu | Ser | Leu | Ser | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Cys | Pro | Phe | Tyr | Ser | Phe | Lys | Lys | Thr | Val | Ala | Val | Thr | Lys | Glu |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Leu | Ile | Pro | Arg | Leu | Cys | Gln | Thr | Lys | Val | Ser | Ser | Leu | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Asp | Phe | Asp | Ile | Lys | Tyr | Val | Phe | Ser | Ser | Ser | Asn | Phe | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Val | Tyr | Ser | Ser | Ser | Asp | Pro | Glu | Ile | Tyr | Phe | Leu | Leu | Ile | Ile |
| 65  |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Trp | Ile | Pro | Gln | Ala | Ile |
|     |     |     |     |     |     |     | 85  |

## 4960

&lt;210&gt; 5636

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5636

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Xaa | Pro | Gly | Arg | Pro | Thr | Arg | Pro | Ala | Arg | Cys | Gln | Gln | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Arg | Ser | Gln | Glu | Gln | Ser | Ala | Ser | Met | Asn | Leu | Gly | Val | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Arg | Ile | Leu | Phe | Leu | Leu | Asp | Val | Gly | Gly | Ala | Gln | Val | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Thr | Gly | Lys | Thr | Pro | Gly | Ala | Glu | Ile | Asp | Phe | Lys | Tyr | Ala | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Gly | Thr | Ala | Val | Gly | Val | Ala | Ile | Ser | Ala | Gly | Phe | Leu | Ala | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ile | Cys | Met | Ile | Arg | Arg | His | Leu | Phe | Asp | Asp | Asp | Ser | Ser | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Ser | Thr | Pro | Gly | Gly | Leu | Ser | Asp | Thr | Ile | Pro | Leu | Lys | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Pro | Arg | Arg | Asn | His | Asn | Phe | Ser | Lys | Arg | Asp | Ala | Gln | Val |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |
|-----|-----|-----|
| Ile | Glu | Leu |
|     |     | 130 |

&lt;210&gt; 5637

&lt;211&gt; 166

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5637

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Thr | Arg | Pro | His | Ser | Ala | Arg | Leu | Thr | Met | Cys | His | Ser | Arg | Ser |
| 1   |     |     |     | 5   |     |     |     |     |     | 10  |     |     |     | 15  |     |

## 4961

Cys His Pro Thr Met Thr Ile Leu Gln Ala Pro Thr Pro Ala Pro Ser  
                   20                  25                  30  
 Thr Ile Pro Gly Pro Arg Arg Gly Ser Gly Pro Glu Ile Phe Thr Phe  
           35                  40                  45  
 Asp Pro Leu Pro Glu Pro Ala Ala Ala Pro Ala Gly Arg Pro Ser Ala  
       50                  55                  60  
 Ser Arg Gly His Arg Lys Arg Ser Arg Arg Val Leu Tyr Pro Arg Val  
   65                  70                  75                  80  
 Val Arg Arg Gln Leu Pro Val Glu Glu Pro Asn Pro Ala Lys Arg Leu  
                   85                  90                  95  
 Leu Phe Leu Leu Leu Thr Ile Val Phe Cys Gln Ile Leu Met Ala Glu  
           100                  105                  110  
 Glu Gly Val Pro Ala Pro Leu Pro Pro Glu Asp Ala Pro Asn Ala Ala  
           115                  120                  125  
 Ser Leu Ala Pro Thr Pro Val Ser Pro Val Leu Glu Pro Phe Asn Leu  
       130                  135                  140  
 Thr Ser Glu Pro Ser Asp Tyr Ala Leu Asp Leu Ser Thr Phe Leu Gln  
   145                  150                  155                  160  
 Gln His Pro Ala Ala Phe  
                   165

&lt;210&gt; 5638

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5638

Gly Pro Ser Trp Arg Ser Asn Pro Arg Gly Arg Ser Ser Ser Thr Trp  
   1                  5                  10                  15  
 Ser Ser Ser Ser Pro Pro Arg Ser Arg Ser Arg Ser Arg Ser Ser Ser  
           20                  25                  30  
 Pro Asn Pro Ser Leu Ser Leu Ser Arg Asn Pro Ser Pro Asn His Asn  
           35                  40                  45  
 Pro Ser Leu Ser Pro Asn Pro Ser Leu Ser Pro Ser Ser Ser Thr Arg  
       50                  55                  60

## 4962

Ile Arg Ile His Ile His Ile His Thr Leu Ile Leu Thr Arg Thr His  
 65 70 75 80  
 Thr Leu Thr Arg Thr Arg Ile Arg Thr Lys Tyr Arg Thr His Thr His  
 85 90 95  
 Ser Arg Thr Arg Ser Arg Thr Gly Thr Gly Phe Ser Ala Ala Pro Pro  
 100 105 110  
 Thr Leu Pro Glu Arg Gly Ser Ser Arg Ala Arg Gln Gly Phe Glu Asp  
 115 120 125  
 Leu Arg Lys Trp Asp Glu His Ile Ser Ile Val Phe Thr Trp Ile Lys  
 130 135 140  
 Ser Lys Thr Val Ser Pro Pro Arg Thr Arg Ser Ser Ser Leu Asp Ile  
 145 150 155 160  
 Thr Leu Leu Lys Thr Cys Asp Ser Ser  
 165

&lt;210&gt; 5639

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5639

Lys Thr Phe Ser Ile Arg Lys Arg Gly Lys Phe Xaa Pro Ser Lys Phe  
 1 5 10 15  
 Asp Tyr Ser Ser Lys Leu Ser Leu Leu Met Gln Ser Ser Phe Val Thr  
 20 25 30  
 Leu Thr Leu Gly His Cys Tyr Gln Thr Ser Trp Glu Ile Ser Ser Ser  
 35 40 45  
 Arg Arg Leu Asn Thr Cys Arg Lys Gln Met Phe Phe Gly Pro  
 50 55 60

&lt;210&gt; 5640

&lt;211&gt; 337

&lt;212&gt; PRT

## 4963

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5640

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Ala | Cys | Gly | Ala | Xaa | Ala | Trp | Lys | Phe | Leu | Leu | Gly | Tyr | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Trp | Glu | Gly | Thr | Ala | Glu | Glu | His | Lys | Ala | His | Ile | Arg | Lys | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Asp | Glu | Tyr | Phe | Arg | Met | Lys | Leu | Gln | Trp | Lys | Ser | Val | Ser | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gln | Glu | Arg | Arg | Asn | Ser | Leu | Leu | His | Gly | Tyr | Arg | Ser | Leu | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Arg | Asp | Val | Ser | Arg | Thr | Asp | Arg | Thr | Asn | Lys | Phe | Tyr | Glu | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Asn | Pro | Gly | Leu | Gly | Leu | Leu | Asn | Asp | Ile | Leu | Leu | Thr | Tyr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Met | Tyr | His | Phe | Asp | Leu | Gly | Tyr | Val | Gln | Gly | Met | Ser | Asp | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Pro | Ile | Leu | Tyr | Val | Ile | Gln | Asn | Glu | Val | Asp | Ala | Phe | Trp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Phe | Cys | Gly | Phe | Met | Glu | Leu | Val | Gln | Gly | Asn | Phe | Glu | Glu | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Glu | Thr | Met | Lys | Arg | Gln | Leu | Gly | Arg | Leu | Leu | Leu | Leu | Leu | Arg |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Asp | Pro | Leu | Leu | Cys | Asp | Phe | Leu | Asp | Ser | Gln | Asp | Ser | Gly |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Cys | Phe | Cys | Phe | Arg | Trp | Leu | Leu | Ile | Trp | Phe | Lys | Arg | Glu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Pro | Phe | Pro | Asp | Val | Leu | Arg | Leu | Trp | Glu | Val | Leu | Trp | Thr | Gly |
|     |     |     | 195 |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Gly | Pro | Asn | Leu | His | Leu | Leu | Val | Ala | Cys | Ala | Ile | Leu | Asp |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Arg | Asp | Thr | Leu | Met | Leu | Ser | Gly | Phe | Gly | Ser | Asn | Glu | Ile |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 4964

225                      230                      235                      240  
 Leu Lys His Ile Asn Glu Leu Thr Met Lys Leu Ser Val Glu Asp Val  
                                  245                      250                      255  
 Leu Thr Arg Ala Glu Ala Leu His Arg Gln Leu Thr Ala Cys Pro Glu  
                                  260                      265                      270  
 Leu Pro His Asn Val Gln Glu Ile Leu Gly Leu Ala Pro Pro Ala Glu  
                                  275                      280                      285  
 Pro His Ser Pro Ser Pro Thr Ala Ser Pro Leu Pro Leu Ser Pro Thr  
                                  290                      295                      300  
 Arg Ala Pro Pro Thr Pro Pro Pro Ser Thr Asp Thr Ala Pro Gln Pro  
 305                                   310                      315                      320  
 Asp Ser Ser Leu Glu Ile Leu Pro Glu Glu Glu Asp Glu Gly Ala Asp  
                                  325                      330                      335  
 Ser

&lt;210&gt; 5641

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5641

Met Gln Leu Leu Leu Leu Thr Cys Leu Leu Gln Leu Ile Met Val Thr  
   1                                    5                                    10                                    15  
 Asn Lys Ala Ile Ala Ser Gln Ile Ser Gln Ile Lys His Phe Phe His  
                                  20                                    25                                    30  
 Cys Ile Leu Val Val Val Cys Pro Asn Ser Ser Met Tyr Leu Ile Met  
                                  35                                    40                                    45  
 Ser Gly Ser Ile Leu His  
                                  50

&lt;210&gt; 5642

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 4965

<221> SITE  
 <222> (44)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (48)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (51)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5642  
 Cys Leu Trp Leu Phe Lys Ser Gln Ser Leu Val Asn His Ile Thr Ile  
   1                  5                  10                  15  
 Arg Pro Trp Phe Ser Ile Gly Gly Asp Phe Pro Arg Gly Thr Phe Gly  
                   20                  25                  30  
 His Val Leu Glu Ala Phe Trp Leu Ser His Trp Xaa Pro Gly Val Xaa  
           35                  40                  45  
 Leu Pro Xaa Thr Lys Lys Lys Lys Lys Lys Lys Arg Gly Ala Phe  
       50                  55                  60  
 Leu  
   65

<210> 5643  
 <211> 83  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (32)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5643  
 Thr Asn Phe Phe Gln Leu Val Lys His His Thr Ser Ser Ala Lys Gly  
   1                  5                  10                  15  
 Ile Leu Leu Ala Glu Pro Ser Trp Met Ile Ser Val Thr His Ala Xaa  
           20                  25                  30  
 Thr Cys Ser Leu Glu Gly Ser Gly Glu Trp Ile His Ala Ile Cys Leu  
       35                  40                  45

## 4966

Glu Asp Thr Arg Met Ser Gln Pro Pro Asp Leu Val Ile Tyr Lys Leu  
 50 55 60

Leu Arg Ile Thr Leu Val Tyr Phe Trp Ser Glu Asn Gly Lys Ala Gln  
 65 70 75 80

Ile Met Lys

&lt;210&gt; 5644

&lt;211&gt; 407

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5644

Ala Ala Cys Gln Pro Arg Cys Cys Cys Ser Ser Cys Cys Gly Thr Ala  
 1 5 10 15

Asp Arg Ala Ala Ala Pro Leu Ser Pro Leu Gln Ala Pro Ile Trp Ala  
 20 25 30

Pro Ala Thr Ser Met Asp Ala Arg Arg Val Pro Gln Lys Asp Leu Arg  
 35 40 45

Val Lys Lys Asn Leu Lys Lys Phe Arg Tyr Val Lys Leu Ile Ser Met  
 50 55 60

Glu Thr Ser Ser Ser Ser Asp Asp Ser Cys Asp Ser Phe Ala Ser Asp  
 65 70 75 80

Asn Phe Ala Asn Thr Arg Leu Gln Ser Val Arg Glu Gly Cys Arg Thr  
 85 90 95

Arg Ser Gln Cys Arg His Ser Gly Pro Leu Arg Val Ala Met Lys Phe  
 100 105 110

Pro Ala Arg Ser Thr Arg Gly Ala Thr Asn Lys Lys Ala Glu Ser Arg  
 115 120 125

Gln Pro Ser Glu Asn Ser Val Thr Asp Ser Asn Ser Asp Ser Glu Asp  
 130 135 140

Glu Ser Gly Met Asn Phe Leu Glu Lys Arg Ala Leu Asn Ile Lys Gln  
 145 150 155 160

Asn Lys Ala Met Leu Ala Lys Leu Met Ser Glu Leu Glu Ser Phe Pro  
 165 170 175

## 4967

Gly Ser Phe Arg Gly Arg His Pro Leu Pro Gly Ser Asp Ser Gln Ser  
 180 185 190  
 Arg Arg Pro Arg Arg Arg Thr Phe Pro Gly Val Ala Ser Arg Arg Asn  
 195 200 205  
 Pro Glu Arg Arg Ala Arg Pro Leu Thr Arg Ser Arg Ser Arg Ile Leu  
 210 215 220  
 Gly Ser Leu Asp Ala Leu Pro Met Glu Glu Glu Glu Glu Asp Lys  
 225 230 235 240  
 Tyr Met Leu Val Arg Lys Arg Lys Thr Val Asp Gly Tyr Met Asn Glu  
 245 250 255  
 Asp Asp Leu Pro Arg Ser Arg Arg Ser Arg Ser Ser Val Thr Leu Pro  
 260 265 270  
 His Ile Ile Arg Pro Val Glu Glu Ile Thr Glu Glu Glu Leu Glu Asn  
 275 280 285  
 Val Cys Ser Asn Ser Arg Glu Lys Ile Tyr Asn Arg Ser Leu Gly Ser  
 290 295 300  
 Thr Cys His Gln Cys Arg Gln Lys Thr Ile Asp Thr Lys Thr Asn Cys  
 305 310 315 320  
 Arg Asn Pro Asp Cys Trp Gly Val Arg Gly Gln Phe Cys Gly Pro Cys  
 325 330 335  
 Leu Arg Asn Arg Tyr Gly Glu Glu Val Arg Asp Ala Leu Leu Asp Pro  
 340 345 350  
 Asn Trp His Cys Pro Pro Cys Arg Gly Ile Cys Asn Cys Ser Phe Cys  
 355 360 365  
 Arg Gln Arg Asp Gly Arg Cys Ala Thr Gly Val Leu Val Tyr Leu Ala  
 370 375 380  
 Lys Tyr His Gly Phe Gly Asn Val His Ala Tyr Leu Lys Ser Leu Lys  
 385 390 395 400  
 Gln Glu Phe Glu Met Gln Ala  
 405

&lt;210&gt; 5645

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4968

&lt;400&gt; 5645

Arg Glu Ala Ser Gly Ser Leu Trp Glu Gln Ser Tyr Lys Leu Ile Glu  
 1 5 10 15

Ile His Thr Leu Pro Lys Gln Leu Gly Pro Thr Thr Val Pro His Val  
 20 25 30

Ser Met Gln Asn Tyr Ile Leu Pro Arg Ile Asn Ser  
 35 40

&lt;210&gt; 5646

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5646

Lys Met Xaa Leu Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr  
 1 5 10 15

Ala Val Xaa Ala Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn  
 20 25 30

Ser Ala Pro Leu Cys Met Tyr Ser Ser Leu Leu Pro Ser Ser Gln Leu  
 35 40 45

Ser Val Arg Tyr Val Phe Leu Ser  
 50 55

&lt;210&gt; 5647

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5647

Ser Val Cys Val His Thr Phe Tyr Phe Ser Val Ser Trp Val Tyr Val  
 1 5 10 15

## 4969

Trp Leu Lys Thr Ile Leu Glu Ser Lys Ser Ile Leu Ile Tyr Lys Lys  
                   20                  25                  30

Thr Phe Trp  
           35

<210> 5648

<211> 106

<212> PRT

<213> Homo sapiens

<400> 5648

Gln Cys Pro Met Gly Pro Leu Leu Leu Pro Ala Pro Ser Leu Leu Leu  
   1                  5                  10                  15

Leu Met His Ser Pro Leu Pro Ala Ala Pro Gly Phe Pro Ala Phe Leu  
                   20                  25                  30

Leu Thr Pro Ser Asn Ser Leu Gly Thr Pro Ala Ala Thr Thr Leu Trp  
           35                  40                  45

Val Gly His Trp Asp Pro Leu Ala Gln Ser Trp Leu Leu Leu Thr Pro  
       50                  55                  60

Ser Leu Asp Ala Cys Pro Gly Thr Pro Ser Pro Leu Pro Leu Pro Cys  
   65                  70                  75                  80

Ser Phe Asn Arg Val Asn His Val Tyr Cys Thr Gly Ala Val Val Ile  
                   85                  90                  95

Ala Glu Thr Ala Gly Trp Arg Arg Ser Arg  
           100                  105

<210> 5649

<211> 85

<212> PRT

<213> Homo sapiens

<400> 5649

Arg Asn Pro Lys Asn Gly Asn Asn Pro Ser His Gly Cys His Thr Leu  
   1                  5                  10                  15

Leu Thr Cys Ser Ile Pro Thr Gln Glu Leu Pro Ala Tyr Gly Ala Ser  
           20                  25                  30

His Trp Ser Thr Ser Tyr Pro Gln His Leu Ser Cys His Cys Gln Gly

## 4970

35                                      40                                      45  
 Thr Tyr Leu Trp Pro Pro Ala Ile Leu Tyr Arg Ala Ile Val Leu Tyr  
     50                                      55                                      60  
 Ile Leu His Ile Arg Lys Leu Arg Leu Lys Val Asn Leu Ile Cys Leu  
     65                                      70                                      75                                      80  
 Cys Gln Ser Gln Asp  
                                     85

&lt;210&gt; 5650

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (177)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5650

Gly Pro Tyr Xaa Tyr Phe Leu Pro Gly Glu Cys Leu Asp Cys Ser Pro  
     1                                      5                                      10                                      15

Leu Leu Val Leu Gln Gly Val Thr His Ala Ala Ile Trp Ala Ala Cys  
                                     20                                      25                                      30

Ile Ser Tyr Leu Ser Ala Ala Val Pro Pro Glu Leu Arg Thr Ser Ala  
                                     35                                      40                                      45

Gln Gly Ile Leu Gln Gly Leu His Leu Gly Leu Gly Arg Gly Cys Gly  
     50                                      55                                      60

Ala Met Ile Gly Gly Val Leu Val Asn Tyr Phe Gly Ala Ala Ala Thr  
     65                                      70                                      75                                      80

Phe Arg Gly Ile Gly Met Ala Cys Leu Val Ile Leu Leu Leu Phe Ala  
                                     85                                      90                                      95

Leu Ile Gln Trp Leu Ala Val Pro Asp Glu Glu Glu Asp Lys Thr Met  
                                     100                                      105                                      110

Leu Ala Glu Arg Ile Pro Val Pro Ser Ser Pro Val Pro Ile Ala Thr

## 4971

|   |     |     |     |     |
|---|-----|-----|-----|-----|
| 115   |     | 120 |     | 125 |
| Ile Asp Leu Val Gln Gln Gln Thr Glu Asp Val Met Pro Arg Ile Glu |     |     |     |     |
| 130   |     | 135 |     | 140 |
| Pro Arg Leu Pro Pro Lys Lys Thr Lys His Gln Glu Glu Gln Glu Asp |     |     |     |     |
| 145   |     | 150 |     | 155 |
| Val Asn Lys Pro Ala Trp Gly Val Ser Ser Ser Pro Trp Val Thr Phe |     |     |     |     |
|   | 165 |     | 170 | 175 |
| Xaa Tyr Ala Leu Tyr Gln Ile Lys Glu Met Met Gln Leu Thr Arg Asp |     |     |     |     |
|   | 180 |     | 185 | 190 |
| Asn Arg Ala Ser Glu Ile Gln Pro Leu Gln Gly Thr Asn Glu Asn Arg |     |     |     |     |
|   | 195 |     | 200 | 205 |
| Glu Asn Ser Pro Ala Gly Arg Ala Gln Pro Val Pro Cys Glu Thr His |     |     |     |     |
|   | 210 |     | 215 | 220 |
| Ser Asp Pro Ser Arg Asn Gln Pro Ser Pro Asp Ala Ala Ala Ser Gln |     |     |     |     |
|   | 225 |     | 230 | 235 |
| Thr Gln Thr Ser Pro Ala His Pro Ser Val Asp Pro Cys Thr Glu Glu |     |     |     |     |
|   | 245 |     | 250 | 255 |
| Ser Glu Glu Gln Gln Ala Gln Leu Ala Ala Gly Gly His             |     |     |     |     |
|   | 260 |     | 265 |     |

&lt;210&gt; 5651

&lt;211&gt; 364

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5651

|   |
|---|
| Cys Leu Arg Lys Ser Phe Glu Met Thr Val Glu Lys Val Gln Gly Ile |
| 1 5 10 15   |
| Ser Arg Leu Glu Gln Leu Cys Glu Glu Phe Ser Glu Glu Glu Arg Val |
| 20 25 30  |
| Arg Glu Leu Lys Gln Glu Lys Lys Arg Gln Lys Arg Lys Asn Arg Arg |
| 35 40 45  |
| Lys Asn Lys Cys Val Cys Asp Ile Pro Thr Pro Leu Gln Thr Ala Asp |
| 50 55 60  |
| Glu Lys Glu Val Ser Gln Glu Lys Glu Thr Asp Phe Ile Glu Asn Ser |
| 65 70 75 80   |



## 4972

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Cys | Lys | Ala | Cys | Gly | Ser | Thr | Glu | Asp | Gly | Asn | Thr | Cys | Val | Glu | 85  | 90  | 95  |     |
| Val | Ile | Val | Thr | Asn | Glu | Asn | Thr | Ser | Cys | Thr | Cys | Pro | Ser | Ser | Gly | 100 | 105 | 110 |     |
| Asn | Leu | Leu | Gly | Ser | Pro | Lys | Ile | Lys | Lys | Gly | Leu | Ser | Pro | His | Cys | 115 | 120 | 125 |     |
| Asn | Gly | Ser | Asp | Cys | Gly | Tyr | Ser | Ser | Ser | Met | Glu | Gly | Ser | Glu | Thr | 130 | 135 | 140 |     |
| Gly | Ser | Arg | Glu | Gly | Ser | Asp | Val | Ala | Cys | Thr | Glu | Gly | Ile | Cys | Asn | 145 | 150 | 155 | 160 |
| His | Asp | Glu | His | Gly | Asp | Asp | Ser | Cys | Val | His | His | Cys | Glu | Asp | Lys | 165 | 170 | 175 |     |
| Glu | Asp | Asp | Gly | Asp | Ser | Cys | Val | Glu | Cys | Trp | Ala | Asn | Ser | Glu | Glu | 180 | 185 | 190 |     |
| Asn | Asp | Thr | Lys | Gly | Lys | Asn | Lys | Lys | Lys | Lys | Lys | Lys | Ser | Lys | Ile | 195 | 200 | 205 |     |
| Leu | Lys | Cys | Asp | Glu | His | Ile | Gln | Lys | Leu | Gly | Ser | Cys | Ile | Thr | Asp | 210 | 215 | 220 |     |
| Pro | Gly | Asn | Arg | Glu | Thr | Ser | Gly | Asn | Thr | Met | His | Thr | Val | Phe | His | 225 | 230 | 235 | 240 |
| Arg | Asp | Lys | Thr | Lys | Asp | Thr | His | Pro | Glu | Ser | Cys | Cys | Ser | Ser | Glu | 245 | 250 | 255 |     |
| Lys | Gly | Gly | Gln | Pro | Leu | Pro | Trp | Phe | Glu | His | Arg | Lys | Asn | Val | Pro | 260 | 265 | 270 |     |
| Gln | Phe | Ala | Glu | Pro | Thr | Glu | Thr | Leu | Phe | Gly | Pro | Asp | Ser | Gly | Lys | 275 | 280 | 285 |     |
| Gly | Ala | Lys | Ser | Leu | Val | Glu | Leu | Leu | Asp | Glu | Ser | Glu | Cys | Thr | Ser | 290 | 295 | 300 |     |
| Asp | Glu | Glu | Ile | Phe | Ile | Ser | Gln | Asp | Glu | Ile | Gln | Ser | Phe | Met | Ala | 305 | 310 | 315 | 320 |
| Asn | Asn | Gln | Ser | Phe | Tyr | Ser | Asn | Arg | Glu | Gln | Tyr | Arg | Gln | His | Leu | 325 | 330 | 335 |     |
| Lys | Glu | Lys | Phe | Asn | Lys | Tyr | Cys | Arg | Leu | Asn | Asp | His | Lys | Arg | Pro | 340 | 345 | 350 |     |

## 4973

Ile Cys Ser Gly Trp Leu Thr Thr Ala Gly Ala Asn  
 355 360

<210> 5652

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5652

Ala Thr Leu Trp Asp Gly His Ala Ala Val Trp His Gly Tyr Glu Val  
 1 5 10 15

His Gly Met Glu Lys Ile Pro Glu Asp Gly Pro Ala Leu Ile Ile Phe  
 20 25 30

Tyr His Gly Ala Ile Pro Ile Asp Phe Tyr Tyr Phe Met Ala Lys Ile  
 35 40 45

Phe Ile His Lys Gly Arg Thr Cys Arg Val Val Ala Asp His Phe Val  
 50 55 60

Phe Lys Ile Gln Gly Leu Val Tyr Tyr Trp Met Cys Phe Val Leu Tyr  
 65 70 75 80

Met Asp Gln Glu Lys Asn Val Leu Lys Phe  
 85 90

<210> 5653

<211> 104

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (3)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5653

His Ser Xaa Met Trp Leu Val His Leu Thr Arg Glu Glu Trp Gly Tyr  
 1 5 10 15

Leu Asp Pro Val Gln Arg Asp Leu Tyr Arg Glu Val Met Leu Glu Asn  
 20 25 30

Tyr Gly Asn Val Val Ser Leu Gly Ile Leu Leu Arg Leu Pro Thr Thr  
 35 40 45

## 4974

Arg Ile His Ser Val Asn Ser Cys Pro Ala Leu Ser His Thr Gln Ala  
 50 55 60

Ser Ala Phe Ser Gly Glu Thr Leu Ala Val Leu Thr Ala Gly Ile Ser  
 65 70 75 80

Lys Arg Trp Pro Lys Tyr Arg Leu Pro Ile Asp Ile Ala Arg Pro Cys  
 85 90 95

Ser Glu Thr Pro Phe Pro Arg Leu  
 100

&lt;210&gt; 5654

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5654

Pro Leu Lys Thr Phe Pro Val Cys Leu Val Ile Ala Lys Pro Arg Lys  
 1 5 10 15

Ile Ser Phe Leu Ser Ser Tyr Arg Glu Leu Ala Met Lys Leu Lys Phe  
 20 25 30

Asn Cys Val Ser Arg Ser Leu Ile Phe Leu Gln Ile Ile Asn Tyr Val  
 35 40 45

Leu

&lt;210&gt; 5655

&lt;211&gt; 40

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5655

Lys Leu Asp Phe Lys Ile Thr Asn Glu Arg Asn Leu Ile Leu Phe Cys  
 1 5 10 15

Asp Arg Ser Gln Val Leu Gln Trp Phe Ala Ile Gln Asn Leu Ile Ile  
 20 25 30

Val Lys Pro Gln Phe Lys Arg Leu  
 35 40

## 4975

&lt;210&gt; 5656

&lt;211&gt; 74

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5656

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Tyr | Leu | Cys | Leu | Leu | Cys | Ile | Leu | Val | Met | Ala | Arg | Ser | Arg | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Thr | Gly | Arg | His | Pro | Ala | Val | Val | Ser | Leu | Leu | Glu | Leu | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Trp | Leu | Ser | Lys | Ile | Leu | Ser | Ile | Glu | Ser | Leu | Ser | Leu | Lys | Xaa |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Gln | Met | Asn | Ala | Gln | His | Glu | Ile | Phe | Lys | Ile | Val | Ser | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Gly | Ser | Asn | Lys | Gln | Lys | Ile | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     |

&lt;210&gt; 5657

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5657

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Val | Thr | Gly | Gln | Ala | Pro | Val | Glu | Ile | Ser | Phe | Val | Leu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ala | Gln | Arg | Trp | Trp | Trp | Phe | Gly | Ser | Ser | Glu | Asp | Cys | Leu | Gly |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Phe | Ser | Gly | His | Gly | Ala | Leu | Cys | Trp | Pro | Gly | Trp | Gly | Trp | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Arg | Cys | Pro | Phe | Pro | Gly | Ala | Leu | Trp | Trp | Leu | Gln | Lys | Thr | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Val | Glu | Asn | Cys | Phe | Ser | Ala | Trp | Asn | Gln | Thr | Ser | Ser | Arg | Trp |
| 65  |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gly | Pro | Cys | Pro | Cys | Val | Gly | His | Tyr | His | Thr | Lys | Arg | Pro | Ile |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4976

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 85  |     |     |     |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Lys | Ile | Lys | Lys | Ile | Lys | Lys | Lys | Lys | Thr | Asn | Tyr | Trp | Arg | Trp | Trp |
| 100 |     |     |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Met | Met | His | Leu | Leu | Phe | Ala | Gly |     |     |     |     |     |     |     |
| 115 |     |     |     |     |     |     |     | 120 |     |     |     |     |     |     |     |

<210> 5658

<211> 25

<212> PRT

<213> Homo sapiens

<400> 5658

Trp Thr Pro Val Ile Pro Gly Thr Arg Glu Ala Glu Ala Gly Glu Ser  
1 5 10 15

Leu Glu Pro Gly Arg Gln Arg Leu Gln  
20 25

<210> 5659

<211> 52

<212> PRT

<213> Homo sapiens

<400> 5659

Ser Ile Asp Thr Phe Tyr Ile Gln Phe Tyr Lys Tyr Lys Tyr Tyr Asn  
1 5 10 15

Phe Ile Leu Met Val Pro Lys Ile His Phe Leu Arg Leu Lys Ala Cys  
20 25 30

Thr Ser Met His Thr Cys Phe Trp Gly Glu Trp Gly Glu Asp Ile Leu  
35 40 45

Ile Ile Ser Leu  
50

<210> 5660

<211> 49

<212> PRT

<213> Homo sapiens

<400> 5660

Tyr Ile Phe Leu Ile Ser Tyr Arg Leu Tyr Arg Lys Glu Val Leu Glu

## 4977

1                      5                      10                      15  
Lys Leu Ile Glu Lys Cys Val Ser Lys Gly Tyr Val Phe Gln Met Glu  
                    20                      25                      30  
Met Ile Val Arg Ala Arg Gln Leu Asn Tyr Thr Ile Gly Glu Val Cys  
                    35                      40                      45

Asn

&lt;210&gt; 5661

&lt;211&gt; 222

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (115)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (117)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (118)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (156)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (194)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (217)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (218)

## 4978

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5661

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Trp | Val | Ala | Tyr | Gly | Ser | Glu | Pro | His | Thr | Ser | Val | Pro | Val | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Gly | Ser | Leu | Pro | Asp | His | Ala | Val | His | Arg | Pro | His | Asp | Arg | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Arg | Ser | Gly | Val | Met | Pro | Pro | Ala | Gln | Leu | Thr | Thr | Ile | Asn | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Gln | Leu | Ser | Ala | Gln | Leu | Gly | Leu | Asn | Leu | Gly | Gly | Ala | Ser | Met |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | His | Thr | Ser | Pro | Ser | Pro | Pro | Ala | Ser | Lys | Ser | Ala | Thr | Pro | Ser |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Pro | Ser | Ser | Ser | Ile | Asn | Glu | Glu | Asp | Ala | Asp | Glu | Ala | Asn | Arg | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ile | Gly | Glu | Lys | Arg | Ala | Ala | Pro | Asp | Ser | Gly | Lys | Lys | Pro | Lys | Thr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Lys | Xaa | Lys | Xaa | Xaa | Lys | Asp | Pro | Asn | Glu | Pro | Gln | Lys | Pro | Val |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Ala | Tyr | Ala | Leu | Phe | Phe | Arg | Asp | Thr | Gln | Ala | Ala | Ile | Lys | Gly |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gln | Asn | Pro | Asn | Ala | Thr | Phe | Gly | Glu | Val | Ser | Xaa | Ile | Val | Ala | Ser |
|     | 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Met | Trp | Asp | Ser | Leu | Gly | Glu | Glu | Gln | Lys | Gln | Val | Tyr | Lys | Arg | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Thr | Glu | Ala | Ala | Lys | Lys | Glu | Tyr | Leu | Lys | Ala | Leu | Ala | Ala | Tyr | Arg |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ala | Xaa | Leu | Val | Ser | Lys | Ala | Ala | Ala | Glu | Ser | Ala | Glu | Ala | Gln | Thr |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ile | Arg | Ser | Val | Gln | Gln | Thr | Leu | Xaa | Xaa | Thr | Asn | Leu | Thr |     |     |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

<210> 5662

<211> 48

<212> PRT

<213> Homo sapiens

## 4979

&lt;400&gt; 5662

Arg Tyr Ile Ile Thr Lys Leu Lys Leu Cys Phe Cys Phe Ile Gln Arg  
 1 5 10 15

Asn Leu Lys Ile Ile Asp Lys Lys Phe Leu Phe Arg Ala Met Ser Leu  
 20 25 30

Tyr His Thr Leu Gly Asn Glu Thr Leu Ser Tyr Val Leu Ser Asp Asn  
 35 40 45

&lt;210&gt; 5663

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5663

Lys Leu Arg Tyr Ile Leu Pro Lys Asn Phe Phe Asn Lys Ile Ala Lys  
 1 5 10 15

Asn Ile Leu Phe Arg His Phe Asn Val Pro Ile Tyr Asn Trp Ile Phe  
 20 25 30

Ser Leu Asn Ser Thr Gln Ser Cys Gly Phe Tyr Phe Gln Leu Ile Phe  
 35 40 45

Phe Leu Val Gly Ser Val His Gly Ile Ile Ser Leu Ser Arg Gly Leu  
 50 55 60

Ser Cys Met Cys Ala Glu Phe Val Lys Glu Ser Ile Gly Arg Cys Arg  
 65 70 75 80

Arg Pro Arg Phe Ala Phe Lys Val Phe Phe Arg Leu Cys Gly  
 85 90

&lt;210&gt; 5664

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5664

Gly Val Phe Ala Ala Met Tyr Ser Tyr Ser Ser Met Leu Thr Leu Pro  
 1 5 10 15



## 4980

Phe Asp Val Val Gln Asn Leu Asp Leu Ser Pro Trp Ile Ser Pro Val  
                     20                    25                    30

Val Pro Ala Ser Arg Gly Ile Phe Leu His Val Ser Gln Pro Pro Ser  
                     35                    40                    45

Cys Ser Arg Val Leu Leu Asp Leu Gly Phe Ser Cys Pro Ser Leu Leu  
                     50                    55                    60

Gly  
                     65

<210> 5665

<211> 111

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (95)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (103)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5665

Ile Ser Asn Thr Ser Ser Asp Cys Arg Pro Ser Glu Glu Ser Glu Leu  
                     1                    5                    10                    15

Leu Thr Asp Thr Thr Thr Asn Ile Leu Ser Gly Thr Thr Ser Thr Val  
                     20                    25                    30

Glu Ser Asp Ile Leu Thr Gln Thr Asp Arg Glu Val Ala Leu His Glu  
                     35                    40                    45

Arg Ser Ser Ser Val Ser Thr Ile Asp Thr Ala Arg Leu Ile Gln Ala  
                     50                    55                    60

Phe Gly His Glu Arg Val Cys Leu Ser Pro Arg Arg Ile Lys Leu Tyr  
                     65                    70                    75                    80

Ser Ser Ile Thr Asn Gln Gln Arg Arg Tyr Leu Glu Glu Ala Xaa Lys  
                     85                    90                    95

His Ser Lys Lys Val Leu Xaa Tyr Arg Ser Ser Pro Ser Asp Phe  
                     100                    105                    110

## 4981

&lt;210&gt; 5666

&lt;211&gt; 129

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (80)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (91)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (106)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (112)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5666

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Ser | Trp | Val | Arg | Leu | Gly | Leu | Ser | Trp | Ala | Leu | Tyr | Val | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ile | Gln | Gly | Tyr | Trp | Ala | Arg | Tyr | Val | Cys | Gly | Xaa | Ile | Pro | Ser |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Gln | Pro | His | Leu | Pro | Leu | Lys | Pro | Ser | Leu | Ala | Leu | Ser | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Phe | Leu | Leu | Pro | Ser | Leu | Pro | Ser | Ala | Gln | Cys | Pro | Thr | Trp |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Cys | Tyr | Phe | Gly | Ser | Gly | Gly | Thr | Ser | Trp | Glu | Cys | Glu | Xaa |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Tyr | Arg | Lys | Ile | Ala | Leu | Gln | Glu | Glu | Xaa | Leu | Gln | Gly | Thr | Ile |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

## 4982

Leu Asn Pro Lys Ala Trp Asn Leu Leu Xaa His Phe Thr Phe Val Xaa  
                   100                  105                  110

Lys Gly Leu Leu Asn Ala Leu Glu Lys Asp Leu Gly Pro Glu Leu Leu  
                   115                  120                  125

Ser

<210> 5667

<211> 124

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (24)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5667

Pro Ile His Glu Leu Met Pro Glu Asp Arg Ala Ser Thr Pro Arg Thr  
       1                  5                  10                  15

Thr Thr Met Thr Phe Thr Cys Xaa Xaa Phe Phe Asp Leu Phe Asn Ala  
                   20                  25                  30

Leu Thr Cys Arg Ser Gln Thr Lys Leu Ile Phe Glu Ile Gly Phe Leu  
                   35                  40                  45

Arg Asn His Met Phe Leu Tyr Ser Val Leu Gly Ser Ile Leu Gly Gln  
                   50                  55                  60

Leu Ala Val Ile Tyr Ile Pro Pro Leu Gln Arg Val Phe Gln Thr Glu  
       65                  70                  75                  80

Asn Leu Gly Ala Leu Asp Leu Leu Phe Leu Thr Gly Leu Ala Ser Ser  
                   85                  90                  95

Val Phe Ile Leu Ser Glu Leu Leu Lys Leu Cys Glu Lys Tyr Cys Cys  
                   100                  105                  110

Ser Pro Lys Arg Val Gln Met His Pro Glu Asp Val  
                   115                  120

## 4983

&lt;210&gt; 5668

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5668

Val Ser Val Lys Gln Phe Tyr Phe Ser Tyr Val Thr Val Ala Gly Tyr  
1 5 10 15

Asp Leu Asn Phe Val Phe Arg Pro Pro Ala Arg Ile Leu Cys Leu Leu  
20 25 30

Leu Tyr Ser Arg Ser Val Phe Leu Pro Arg Leu Arg His Arg Gly Pro  
35 40 45

Gln Pro  
50

&lt;210&gt; 5669

&lt;211&gt; 170

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (38)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (63)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (97)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (154)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5669

Leu Leu His Leu Ile Leu Tyr Met Ser Asn Ala Ser Phe Leu Ser Val  
1 5 10 15

## 4984

Cys Leu Leu Ala Glu Asn Pro Val Gln Leu Ser Pro Gly Cys His Gly  
                   20                  25                  30  
 Lys Tyr Asp Lys Glu Xaa Thr Leu Gly Leu Gly Leu Lys Gly Leu Val  
                   35                  40                  45  
 Ile Gln Lys Thr Arg Glu Gly Cys Thr Cys Arg Val Ile Tyr Xaa Arg  
                   50                  55                  60  
 Asn Leu Ile Lys Tyr Leu Ala His Arg Ser Tyr Lys Glu Ser Phe Gln  
                   65                  70                  75                  80  
 Arg Gly Pro Leu Ala Thr Ala Gly Phe Phe Val Arg Asn Ile Cys Val  
                   85                  90                  95  
 Xaa Phe Tyr Pro Arg Glu Gln Asn Pro Arg Lys Gly Ser Phe Ile Ile  
                   100                  105                  110  
 Tyr Ser His Phe Ser Ser Phe Leu Asn Lys Thr Phe Ser Ser Arg Asn  
                   115                  120                  125  
 Thr Ala Phe Glu Gly Leu Cys Phe Met Gln Pro Ala Ser Leu Val Asp  
                   130                  135                  140  
 Leu Phe Thr Arg Ser His Gln Val Ile Xaa Ser Ile Leu Gly Arg Trp  
                   145                  150                  155                  160  
 Arg Lys Gln Thr Asp Thr Val Ser Arg Cys  
                   165                  170

&lt;210&gt; 5670

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (61)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (75)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5670

Tyr Val Leu Ser Ala Phe Arg Gly Leu Ser Arg Val Ile Asp Arg His  
           1                  5                  10                  15

## 4985

Leu Asn Glu Ala Leu Ser Phe Leu Lys Cys Lys Val Gly Glu Thr Gln  
                   20                  25                  30  
 Asp Thr Arg Lys Arg Lys Asp Ile Val His Ile Val Val Ala Val Ala  
                   35                  40                  45  
 Leu Arg Thr Val Leu Ala Arg Asp Arg Leu Gly Ile Xaa Ile Asn Pro  
                   50                  55                  60  
 Gly His Trp Gly Ser Phe Ser Gly Ser Leu Xaa Leu Ser Leu Pro Gly  
                   65                  70                  75                  80  
 Ser Thr His

&lt;210&gt; 5671

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (96)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5671

Val His Phe Ile Ser Thr Phe Tyr Tyr Ile Tyr Leu Ile Ala Gln Val  
           1                  5                  10                  15  
 Leu Leu Ser Arg Lys Lys Trp Asp Val Ala Asn Thr Ala Leu Leu Ala  
                   20                  25                  30  
 Cys Arg Gln Cys Cys Pro Val Asn Arg Leu Lys Cys Ile Phe Ile Ser  
                   35                  40                  45  
 Trp Tyr Ile Asn Leu Arg Lys Glu Lys Lys Lys Lys Lys Lys Lys Lys  
           50                  55                  60  
 Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
           65                  70                  75                  80  
 Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Xaa  
                   85                  90                  95  
 Gly Gly

## 4986

&lt;210&gt; 5672

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5672

Val Phe Leu Thr Tyr Ser Gly Gly Asp Ser Val Met Gln Ile Val Met  
 1 5 10 15

Phe Asp Arg Gln Ser Ile Phe Ile His Gly Met Lys Ile Ser Leu Gln  
 20 25 30

Gln Arg Ile Pro Gly Val Ser Ile Gln Gly Ala Ser Gln Ala Asp Glu  
 35 40 45

Leu Trp Gln Lys Leu Glu Ser Tyr Pro Glu Ala Leu Val Met Leu Asp  
 50 55 60

Gly Asp Gln Asp Gly Glu Phe Cys Tyr Trp Leu Leu Gln Lys Thr Val  
 65 70 75 80

Val Gln Phe Pro Glu Val Lys Val Leu Ile Thr Ala Thr Asp Cys Asn  
 85 90 95

Lys Arg Trp Leu Gln Glu Val Ile His Phe Asn Val Leu Ala Ile Val  
 100 105 110

Pro Arg Asp Ser Thr Val Glu Thr Phe Ala Leu Ala Val Asn Ser Ala  
 115 120 125

Ala Met Gly Met Met Phe Leu Pro Gly Asp Trp Arg Thr Thr Pro Glu  
 130 135 140

Lys Asp Ile Lys Asp Leu Lys Ser Leu Ser Ala Arg Gln Arg Glu Ile  
 145 150 155 160

Leu Thr Met Leu Ala Ala Gly Glu Ser Asn Lys Glu Ile Gly Arg Ala  
 165 170 175

Leu Asn Ile Ser Thr Gly Thr Val Lys Ala His Leu Glu Ser Leu Tyr  
 180 185 190

Arg Arg Leu Glu Val Lys Asn  
 195

&lt;210&gt; 5673

&lt;211&gt; 192

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 4987

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (166)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (172)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5673

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Met | Leu | His | Ala | Glu | Ala | Pro | Ala | Pro | Ala | Arg | Phe | Pro | Ala | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Met | Gly | His | Gly | Gly | Ala | Phe | Gly | Glu | Gly | Leu | Cys | Gly | Phe | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Lys | Ser | Arg | Leu | Met | Pro | Leu | Ile | Pro | Ser | Gln | Glu | Val | Ala | Glu |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Gly | Ser | Val | Gln | Ala | Pro | Arg | Gly | Gly | Asp | Val | Gln | Val | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Val | Cys | Arg | Arg | Arg | Gly | Ser | Leu | Pro | Trp | Ala | Gly | Cys | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Leu | Gly | Val | Pro | Gly | Cys | Gln | Glu | Lys | Phe | Thr | His | Thr | Arg | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Ala | Lys | Gly | Glu | Ser | Tyr | Asp | Gly | Arg | Ala | Arg | Ala | Leu | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | His | Gln | Val | Cys | Ser | Gln | Ser | Ser | Arg | Ser | Ala | Pro | Val | Thr | Trp |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Arg | Pro | Ala | Phe | Arg | Gly | Leu | Ser | Phe | Leu | Ile | Cys | Leu | Met | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Ile | Pro | Thr | Phe | Pro | Val | Leu | Val | Gly | Phe | Ser | Leu | Asp | Ala |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Glu | Thr | Ala | Ala | Xaa | Glu | Gly | Leu | Phe | Gly | Xaa | Leu | Phe | His | Val |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Leu | Leu | Pro | Cys | Pro | His | Gly | Ala | Gly | Gly | Ala | Gly | Ala | Trp |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |



## 4988

&lt;210&gt; 5674

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (38)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5674

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Cys | Asn | Cys | Ile | Thr | Val | Thr | Asn | Glu | Ile | Leu | Ser | Leu | Leu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ile | Cys | Pro | Lys | Lys | Pro | Pro | Pro | His | Val | Leu | Ser | Gly | Glu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Xaa | His | Phe | Trp | Xaa | Thr | Ala | Gln | Ile | Asn | Ser |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     |

&lt;210&gt; 5675

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5675

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Tyr | Ser | Ser | Leu | Ser | Pro | Arg | Ile | Asp | Ser | Ile | Thr | Gln | Ser | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Asn | Leu | Asn | Gly | Leu | Ala | Pro | Ser | Phe | Phe | Ser | Lys | Asn | Asn | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ile | Lys | Lys | Lys | Phe | Glu | Gly | Leu | Asn | Tyr | Phe | Asn | Gly | Cys | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Tyr | Ser | Val | Gln | Phe | Val | Pro | Val | Ser | Ser | Leu | Ser | Val | Trp | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ile | Lys | Tyr | Cys | Ala | Lys | Leu | Val | Leu | Gly | Tyr | Ile | Leu | Gln | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Phe | Tyr | Leu | Thr | Asn | Arg | Ile | Leu | Val | Pro |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4989

85

90

&lt;210&gt; 5676

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5676

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Met | Phe | Thr | Phe | Gly | Arg | Leu | Phe | Gln | Ile | Ile | Thr | Val | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Cys | Leu | Gln | Phe | Ile | Gln | Asp | Cys | Cys | Ile | His | Ser | Arg | Gln | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ser | Leu | Leu | Glu | Thr | Ser | Ser | Leu | Ser | Arg | Cys | Leu | Glu | Xaa | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |
|-----|-----|-----|
| Asp | Val | Cys |
|     | 50  |     |

&lt;210&gt; 5677

&lt;211&gt; 486

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (197)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (203)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (483)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5677

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Val | Gln | Ile | Arg | Ile | Leu | Asp | Val | Asn | Asp | Asn | Ile | Pro | Val | Val |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4990

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Glu Asn Lys Val Leu Glu Gly Met Val Glu Glu Asn Gln Val Asn Val | 20  | 25  | 30  |
| Glu Val Thr Arg Ile Lys Val Phe Asp Ala Asp Glu Ile Gly Ser Asp | 35  | 40  | 45  |
| Asn Trp Leu Ala Asn Phe Thr Phe Ala Ser Gly Asn Glu Gly Gly Tyr | 50  | 55  | 60  |
| Phe His Ile Glu Thr Asp Ala Gln Thr Asn Glu Gly Ile Val Thr Leu | 65  | 70  | 75  |
| Ile Lys Glu Val Asp Tyr Glu Glu Met Lys Asn Leu Asp Phe Ser Val | 85  | 90  | 95  |
| Ile Val Ala Asn Lys Ala Ala Phe His Lys Ser Ile Arg Ser Lys Tyr | 100 | 105 | 110 |
| Lys Pro Thr Pro Ile Pro Ile Lys Val Lys Val Lys Asn Val Lys Glu | 115 | 120 | 125 |
| Gly Ile His Phe Lys Ser Ser Val Ile Ser Ile Tyr Val Ser Glu Ser | 130 | 135 | 140 |
| Met Asp Arg Ser Ser Lys Gly Gln Ile Ile Gly Asn Phe Gln Ala Phe | 145 | 150 | 155 |
| Asp Glu Asp Thr Gly Leu Pro Ala His Ala Arg Tyr Val Lys Leu Glu | 165 | 170 | 175 |
| Asp Arg Asp Asn Trp Ile Ser Val Asp Ser Val Thr Ser Glu Ile Lys | 180 | 185 | 190 |
| Leu Ala Lys Leu Xaa Asp Phe Glu Ser Arg Xaa Val Gln Asn Gly Thr | 195 | 200 | 205 |
| Tyr Thr Val Lys Ile Val Ala Ile Ser Glu Asp Tyr Pro Arg Lys Thr | 210 | 215 | 220 |
| Ile Thr Gly Thr Val Leu Ile Asn Val Glu Asp Ile Asn Asp Asn Cys | 225 | 230 | 235 |
| Pro Thr Leu Ile Glu Pro Val Gln Thr Ile Cys His Asp Ala Glu Tyr | 245 | 250 | 255 |
| Val Asn Val Thr Ala Glu Asp Leu Asp Gly His Pro Asn Ser Gly Pro | 260 | 265 | 270 |
| Phe Ser Phe Ser Val Ile Asp Lys Pro Pro Gly Met Ala Glu Lys Trp |     |     |     |

## 4991

|   |         |         |
|---|---------|---------|
| 275   | 280     | 285     |
| Lys Ile Ala Arg Gln Glu Ser Thr Ser Val Leu Leu Gln Gln Ser Glu |         |         |
| 290   | 295     | 300     |
| Lys Lys Leu Gly Arg Ser Glu Ile Gln Phe Leu Ile Ser Asp Asn Gln |         |         |
| 305   | 310     | 315 320 |
| Gly Phe Ser Cys Pro Glu Lys Gln Val Leu Thr Leu Thr Val Cys Glu |         |         |
|   | 325 330 | 335     |
| Cys Leu His Gly Ser Gly Cys Arg Glu Ala Gln His Asp Ser Tyr Val |         |         |
|   | 340 345 | 350     |
| Gly Leu Gly Pro Ala Ala Ile Ala Leu Met Ile Leu Ala Phe Leu Leu |         |         |
|   | 355 360 | 365     |
| Leu Leu Leu Val Pro Leu Leu Leu Leu Met Cys His Cys Gly Lys Gly |         |         |
|   | 370 375 | 380     |
| Ala Lys Gly Phe Thr Pro Ile Pro Gly Thr Ile Glu Met Leu His Pro |         |         |
| 385   | 390 395 | 400     |
| Trp Asn Asn Glu Gly Ala Pro Pro Glu Asp Lys Val Val Pro Ser Phe |         |         |
|   | 405 410 | 415     |
| Leu Pro Val Asp Gln Gly Gly Ser Leu Val Gly Arg Asn Gly Val Gly |         |         |
|   | 420 425 | 430     |
| Gly Met Ala Lys Glu Ala Thr Met Lys Gly Ser Ser Ser Ala Ser Ile |         |         |
|   | 435 440 | 445     |
| Val Lys Gly Gln His Glu Met Ser Glu Met Asp Gly Arg Trp Glu Glu |         |         |
|   | 450 455 | 460     |
| His Arg Ser Leu Leu Ser Gly Arg Ala Thr Gln Phe Thr Gly Ala Thr |         |         |
| 465   | 470 475 | 480     |
| Gly Ala Xaa His Asp His   |         |         |
|   | 485     |         |

&lt;210&gt; 5678

&lt;211&gt; 311

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (135)

## 4992

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (175)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5678

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ile | Val | Pro | Ser | Trp | Asp | Leu | Asp | Lys | Asp | Thr | Ile | Ser | Leu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Val | Leu | Cys | Ile | Phe | Pro | Ser | Pro | Ser | Ser | Gln | Thr | Ser | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Val | Phe | Ser | Leu | Ala | Gly | Arg | Met | Thr | Gln | Asn | Thr | Val | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asn | Gly | Val | Ala | Met | Ala | Ser | Arg | Pro | Ser | Gln | Pro | Thr | His | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Val | His | Ile | His | Gln | Glu | Ser | Ala | Leu | Thr | Gln | Leu | Leu | Lys | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Ser | Leu | Lys | Lys | Phe | Leu | Phe | His | Pro | Gly | Asp | Thr | Val | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Ala | Arg | Ile | Gly | Tyr | Glu | Gln | Leu | Ala | Leu | Gly | Val | Thr | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Leu | Gly | Val | Val | Ser | Cys | Val | Leu | Gly | Val | Cys | Leu | Ser | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Trp | Thr | Val | Leu | Xaa | Ala | Ser | Gly | Cys | Ala | Phe | Trp | Ala | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Val | Ile | Ala | Ala | Gly | Ala | Gly | Ala | Ile | Val | His | Glu | Lys | His |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Lys | Leu | Ala | Gly | Tyr | Ile | Ser | Ser | Leu | Leu | Thr | Leu | Xaa | Gly |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ala | Thr | Ala | Met | Ala | Ala | Val | Val | Leu | Cys | Val | Asn | Ser | Phe | Ile |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Gln | Thr | Glu | Pro | Phe | Leu | Tyr | Ile | Asp | Thr | Val | Cys | Asp | Arg | Ser |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Pro | Val | Phe | Pro | Thr | Thr | Gly | Tyr | Arg | Trp | Met | Arg | Arg | Ser | Gln |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asn | Gln | Trp | Gln | Lys | Glu | Glu | Cys | Arg | Ala | Tyr | Met | Gln | Met | Leu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 4993

225                      230                      235                      240  
 Arg Lys Leu Phe Thr Ala Ile Arg Ala Leu Phe Leu Ala Val Cys Val  
                                  245                      250                      255  
 Leu Lys Val Ile Val Ser Leu Val Ser Leu Gly Val Gly Leu Arg Asn  
                                  260                      265                      270  
 Leu Cys Gly Gln Ser Ser Gln Pro Leu Asn Glu Glu Gly Ser Glu Lys  
                                  275                      280                      285  
 Arg Leu Leu Gly Glu Asn Ser Val Pro Pro Ser Pro Ser Arg Glu Gln  
                                  290                      295                      300  
 Thr Ser Thr Ala Ile Val Leu  
 305                      310

&lt;210&gt; 5679

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (85)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5679

Ala Gln Trp Leu Pro Leu Glu Glu Arg Gly Ala Glu Thr Glu Thr Lys  
   1                      5                      10                      15

Val Gln Glu Arg Glu Asn Gly Glu Ser Pro Leu Glu Leu Glu Gln Leu  
                                  20                      25                      30

Asp Gln His His Glu Met Lys Glu Thr Asn Glu Gln Lys Leu His Lys  
                                  35                      40                      45

Ile Ala Asn Glu Leu Leu Leu Thr Glu Arg Ala Tyr Val Asn Arg Leu  
                                  50                      55                      60

Asp Leu Leu Asp Gln Val Phe Tyr Cys Lys Leu Leu Glu Glu Ala Asn  
   65                      70                      75                      80

Arg Gly Ser Phe Xaa Ala Glu Met Val Ile Lys Ser Phe Leu Ile Phe  
                                  85                      90                      95

His Gln

## 4994

&lt;210&gt; 5680

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5680

Ala Arg Lys Glu Ile Gln Tyr Cys Phe Trp Thr Leu Ile Lys Ser Cys  
1 5 10 15

Ala Ile Asp Thr Tyr Met Ser His Leu Ala Val Leu Arg Arg Ala Ile  
20 25 30

Ile Thr Leu Gln Leu Thr Leu Glu Asn Ile Leu Ala Phe Glu His Phe  
35 40 45

Ser Asn Asn Gln Val Asp Ser Arg Gly Ser  
50 55

&lt;210&gt; 5681

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5681

Ser Leu Thr Ser Lys Pro Glu Thr Ser Glu Ile Leu Lys Ala Asn Leu  
1 5 10 15

Phe Ser Leu Leu Cys Ile Lys Phe Ile Tyr Leu Lys Cys Tyr Cys Ser  
20 25 30

Trp Leu Arg Ile Ile Leu Cys Lys Phe Ser Phe Phe Val Val Cys Leu  
35 40 45

Phe Ala Cys Cys Ser Pro  
50

&lt;210&gt; 5682

&lt;211&gt; 486

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 4995

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (326)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (400)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (406)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5682

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Thr | Ala | Val | Thr | Xaa | Ala | Leu | Glu | Leu | Val | Asp | Pro | Pro | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Arg | Asn | Ser | Ala | Arg | Gly | Tyr | Ile | Gln | Tyr | Gly | Asn | Glu | Glu | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Gln | Ala | Phe | Glu | Glu | Leu | Arg | Asp | Asp | Leu | Val | Glu | Leu | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Lys | Tyr | Ser | Arg | Asn | Ile | Val | Lys | Lys | Phe | Leu | Met | Tyr | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Lys | Pro | Gln | Ile | Ala | Glu | Ile | Ile | Arg | Ser | Phe | Lys | Gly | His | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Met | Leu | Arg | His | Ala | Glu | Ala | Ser | Ala | Ile | Val | Glu | Tyr | Ala |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Asn | Asp | Lys | Ala | Ile | Leu | Glu | Gln | Arg | Asn | Met | Leu | Thr | Glu | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Gly | Asn | Thr | Phe | Gln | Leu | Tyr | Lys | Ser | Ala | Asp | His | Arg | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Lys | Val | Leu | Glu | Val | Gln | Pro | Glu | Lys | Leu | Glu | Leu | Ile | Met |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Glu | Met | Lys | Gln | Ile | Leu | Thr | Pro | Met | Ala | Gln | Lys | Glu | Ala | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Lys | His | Ser | Leu | Val | His | Lys | Val | Phe | Leu | Asp | Phe | Phe | Thr | Tyr |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Pro | Lys | Leu | Arg | Ser | Glu | Met | Ile | Glu | Ala | Ile | Arg | Glu | Ala |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 4996

|   |     |     |
|---|-----|-----|
| 180   | 185 | 190 |
| Val Val Tyr Leu Ala His Thr His Asp Gly Ala Arg Val Ala Met His |     |     |
| 195   | 200 | 205 |
| Cys Leu Trp His Gly Thr Pro Lys Asp Arg Lys Val Ile Val Lys Thr |     |     |
| 210   | 215 | 220 |
| Met Lys Thr Tyr Val Glu Lys Val Ala Asn Gly Gln Tyr Ser His Leu |     |     |
| 225   | 230 | 235 |
| Val Leu Leu Ala Ala Phe Asp Cys Ile Asp Asp Thr Lys Leu Val Lys |     |     |
| 245   | 250 | 255 |
| Gln Ile Ile Ile Ser Glu Ile Ile Ser Ser Leu Pro Ser Ile Val Asn |     |     |
| 260   | 265 | 270 |
| Asp Lys Tyr Gly Arg Lys Val Leu Leu Tyr Leu Leu Ser Pro Arg Asp |     |     |
| 275   | 280 | 285 |
| Pro Ala His Thr Val Arg Glu Ile Ile Glu Val Leu Gln Lys Gly Asp |     |     |
| 290   | 295 | 300 |
| Gly Asn Ala His Ser Lys Lys Asp Thr Glu Val Arg Arg Arg Glu Leu |     |     |
| 305   | 310 | 315 |
| Leu Glu Ser Ile Ser Xaa Ala Leu Leu Ser Tyr Leu Gln Glu His Ala |     |     |
| 325   | 330 | 335 |
| Gln Glu Val Val Leu Asp Lys Ser Ala Cys Val Leu Val Ser Asp Ile |     |     |
| 340   | 345 | 350 |
| Leu Gly Ser Ala Thr Gly Asp Val Gln Pro Thr Met Asn Ala Ile Ala |     |     |
| 355   | 360 | 365 |
| Ser Leu Ala Ala Thr Gly Leu His Pro Gly Gly Lys Asp Gly Glu Leu |     |     |
| 370   | 375 | 380 |
| His Ile Ala Glu His Pro Ala Gly His Leu Val Leu Lys Trp Leu Xaa |     |     |
| 385   | 390 | 395 |
| Glu Gln Asp Lys Lys Xaa Lys Glu Asn Gly Arg Glu Gly Cys Phe Ala |     |     |
| 405   | 410 | 415 |
| Lys Thr Leu Val Glu His Val Gly Met Lys Asn Leu Lys Ser Trp Ala |     |     |
| 420   | 425 | 430 |
| Ser Val Asn Arg Gly Ala Ile Ile Leu Ser Ser Leu Leu Gln Ser Cys |     |     |
| 435   | 440 | 445 |
| Asp Leu Glu Val Ala Asn Lys Val Lys Ala Ala Leu Lys Ser Leu Ile |     |     |

## 4997

450                      455                      460  
 Pro Thr Leu Glu Lys Thr Lys Ser Thr Ser Lys Gly Ile Glu Ile Leu  
 465                      470                      475                      480  
  
 Leu Glu Lys Leu Ser Thr  
                                  485  
  
 <210> 5683  
 <211> 213  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (90)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (138)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5683  
 Val Leu Asp Val Ala Ala Gly Met Ile Lys Pro Gly Val Thr Thr Glu  
   1                      5                      10                      15  
  
 Glu Ile Asp His Ala Val His Leu Ala Cys Ile Ala Arg Asn Cys Tyr  
                                  20                      25                      30  
  
 Pro Ser Pro Leu Asn Tyr Tyr Asn Phe Pro Lys Ser Cys Cys Thr Ser  
                                  35                      40                      45  
  
 Val Asn Glu Val Ile Cys His Gly Ile Pro Asp Arg Arg Pro Leu Gln  
   50                      55                      60  
  
 Glu Gly Asp Ile Val Asn Val Asp Ile Thr Leu Tyr Arg Asn Gly Tyr  
   65                      70                      75                      80  
  
 His Gly Asp Leu Asn Glu Thr Phe Phe Xaa Gly Glu Val Asp Asp Gly  
                                  85                      90                      95  
  
 Ala Arg Lys Leu Val Gln Thr Thr Tyr Glu Cys Leu Met Gln Ala Ile  
                                  100                      105                      110  
  
 Asp Ala Val Lys Pro Gly Val Arg Tyr Arg Glu Leu Gly Asn Ile Ile  
                                  115                      120                      125  
  
 Gln Lys His Ala Gln Ala Asn Gly Phe Xaa Val Val Arg Ser Tyr Cys

## 4998

130                      135                      140  
 Gly His Gly Asn Pro Gln Ala Phe Ser Tyr Ser Ser Gln Cys Thr Pro  
 145                      150                      155                      160  
 Leu Cys Leu Lys Ile Lys Gln Leu Gly Val Met Glu Val Gly Pro Cys  
                                  165                      170                      175  
 Ile Tyr Asn Trp Ser Gln Trp Phe Val Glu Gly Gly Trp Gln Asp Gly  
                                  180                      185                      190  
 Asn Leu Gly Gln Met Val Gly Thr Ala Val Asp Lys Arg Arg Glu Ser  
                                  195                      200                      205  
 Gly Leu Leu Gln Phe  
                                  210

&lt;210&gt; 5684

&lt;211&gt; 279

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (39)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (251)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (256)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (257)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5684

Thr His Ala Ser Ala His Thr Thr Asn Pro Glu Gln Thr Leu Pro Gly  
 1                      5                      10                      15

Thr Asn Leu Thr Gly Phe Leu Ser Pro Val Asp Asn His Met Arg Asn  
                                  20                      25                      30

## 4999

Leu Thr Ser Gln Asp Leu Xaa Tyr Asp Leu Asp Ile Asn Ile Phe Asp  
                   35                                  40                                  45

Glu Ile Asn Leu Met Ser Leu Ala Thr Glu Asp Asn Phe Asp Pro Ile  
           50                                  55                                  60

Asp Val Ser Gln Leu Phe Asp Glu Pro Asp Ser Asp Ser Gly Leu Ser  
       65                                  70                                  75                                  80

Leu Asp Ser Ser His Asn Asn Thr Ser Val Ile Lys Ser Asn Ser Ser  
                                   85                                  90                                  95

His Ser Val Cys Asp Glu Gly Ala Ile Gly Tyr Cys Thr Asp His Glu  
                   100                                  105                                  110

Ser Ser Ser His His Asp Leu Glu Gly Ala Val Gly Gly Tyr Tyr Pro  
           115                                  120                                  125

Glu Pro Ser Lys Leu Cys His Leu Asp Gln Ser Asp Ser Asp Phe His  
       130                                  135                                  140

Gly Asp Leu Thr Phe Gln His Val Phe His Asn His Thr Tyr His Leu  
   145                                  150                                  155                                  160

Gln Pro Thr Ala Pro Glu Ser Thr Ser Glu Pro Phe Pro Trp Pro Gly  
                   165                                  170                                  175

Lys Ser Gln Lys Ile Arg Ser Arg Tyr Leu Glu Asp Thr Asp Arg Asn  
                   180                                  185                                  190

Leu Ser Arg Asp Glu Gln Arg Ala Lys Ala Leu His Ile Pro Phe Ser  
           195                                  200                                  205

Val Asp Glu Ile Val Gly Met Pro Val Asp Ser Phe Asn Ser Met Leu  
       210                                  215                                  220

Ser Arg Tyr Tyr Leu Thr Asp Leu Gln Val Ser Leu Ile Arg Asp Ile  
   225                                  230                                  235                                  240

Arg Arg Arg Gly Lys Asn Lys Val Ala Ala Xaa Asn Cys Arg Lys Xaa  
                   245                                  250                                  255

Xaa Leu Asp Ile Ile Leu Asn Leu Glu Asp Asp Gly Met Val Thr Trp  
                   260                                  265                                  270

Pro Ala Lys Lys Gly Asn Pro  
       275

## 5000

&lt;211&gt; 234

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5685

Lys Asn Leu Thr Glu Asn Gln Glu Ala Leu Ala Lys Glu Met Arg Ala  
 1 5 10 15

Asp Ala Asp Ala Tyr Arg Arg Lys Val Asp Leu Glu Glu His Met Phe  
 20 25 30

His Lys Leu Ile Glu Ala Gly Glu Thr Gln Ser Gln Lys Thr Gln Lys  
 35 40 45

Val Ile Lys Glu Asn Leu Ala Lys Ala Glu Gln Ala Cys Leu Asn Thr  
 50 55 60

Asp Trp Gln Ile Gln Ser Leu His Lys Gln Lys Cys Asp Asp Leu Gln  
 65 70 75 80

Arg Asn Lys Cys Tyr Gln Glu Val Ala Lys Leu Leu Arg Glu Asn Arg  
 85 90 95

Arg Lys Glu Ile Glu Ile Ile Asn Ala Met Val Glu Glu Glu Ala Lys  
 100 105 110

Lys Trp Lys Glu Ala Glu Gly Lys Glu Phe Arg Leu Arg Ser Ala Lys  
 115 120 125

Lys Ala Ser Ala Leu Ser Asp Ala Ser Arg Lys Trp Phe Leu Lys Gln  
 130 135 140

Glu Ile Asn Ala Ala Val Glu His Ala Glu Asn Pro Cys His Lys Glu  
 145 150 155 160

Glu Pro Arg Phe Gln Asn Glu Gln Asp Ser Ser Cys Leu Pro Arg Thr  
 165 170 175

Ser Gln Leu Asn Asp Ser Ser Glu Met Asp Pro Ser Thr Gln Ile Ser  
 180 185 190

Leu Asn Arg Arg Ala Val Glu Trp Asp Thr Thr Gly Gln Asn Leu Ile  
 195 200 205

Lys Lys Val Arg Asn Leu Arg Gln Arg Leu Thr Ala Arg Ala Arg His  
 210 215 220

Arg Cys Gln Thr Pro His Leu Leu Ala Ala  
 225 230

## 5001

&lt;210&gt; 5686

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (66)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (84)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5686

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ile | Lys | Phe | Cys | Phe | Tyr | Leu | Gly | Thr | Arg | Ala | Leu | Gln | Asp | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Ala | Tyr | Leu | Ser | Ser | Leu | Asp | Ser | Leu | Tyr | Ser | Ser | Ile | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Gly | Pro | Trp | Thr | Glu | Ala | Leu | Pro | Asn | Asn | Ala | Glu | His | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Pro | Phe | Ala | Arg | Met | Val | Leu | Met | Val | Pro | Lys | Ile | Thr | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Xaa | Pro | Lys | Phe | Arg | Thr | Gln | Ile | Thr | Leu | Trp | Arg | Arg | Pro | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Ala | Xaa | Ala | Phe | Lys | Ala | Leu | Arg | Asp | Leu | Asp | Thr | Arg | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Ile | Tyr | Ile | Tyr | Phe | Lys | Ser | Ile | Ser | Ser | Leu | Ser | His | Ala |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

His

&lt;210&gt; 5687

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5687

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Ile | Lys | Thr | Ser | Tyr | Ser | Leu | Asn | Pro | Lys | Ala | Lys | Leu | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 5002

Ser Arg Ala Asn Gln Ser Ser Trp Gly Gln Asn Arg Thr Lys Thr Tyr  
                   20                  25                  30

Leu Met Gln Gly Ile Glu Ala Arg Pro Lys Thr Gly Gln Pro Asn Arg  
           35                  40                  45

Met Gly His Leu Pro Pro Leu Met Pro Ala Cys Pro Ser Val Ile Ile  
       50                  55                  60

Asn Ser Ala Pro Phe His Ser Pro Lys Ser Pro Val Gln Thr  
       65                  70                  75

&lt;210&gt; 5688

&lt;211&gt; 43

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (11)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5688

Leu Ser Leu Thr Lys Gly Asn Lys Ser Xaa Xaa Ser Thr Ala Val Ala  
   1                  5                  10                  15

Ala Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg  
           20                  25                  30

Ala Ser Asn Leu Tyr Phe Tyr Leu Leu Cys Ile  
       35                  40

&lt;210&gt; 5689

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5689

Thr Thr Tyr Cys Phe Pro Leu Phe Gln Gly Asp Ala Val Asp Tyr Gln  
   1                  5                  10                  15

## 5003

Lys Gln Leu Lys Gln Met Ile Lys Asp Leu Ala Lys Glu Lys Asp Lys  
                   20                  25                  30

Thr Glu Lys Glu Leu Pro Lys Met Ser Gln Val Trp Thr Phe Phe Ser  
           35                  40                  45

Ala Glu Asn  
       50

<210> 5690

<211> 35

<212> PRT

<213> Homo sapiens

<400> 5690

Glu Ala Leu Val Asp Phe Leu Tyr Trp Tyr Phe Arg Ser Leu Leu Ser  
       1                  5                  10                  15

Phe Leu Thr Glu Val Gly Ala Asn Glu Leu Ser Ile Leu Ser Thr Trp  
                   20                  25                  30

Leu Ile Lys  
           35

<210> 5691

<211> 32

<212> PRT

<213> Homo sapiens

<400> 5691

Gly Asn Lys Ser Trp Gly Ser Thr Ala Val Thr Thr Ala Leu Glu Leu  
       1                  5                  10                  15

Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg Ala Tyr Lys Leu Ser  
                   20                  25                  30

<210> 5692

<211> 74

<212> PRT

<213> Homo sapiens

<400> 5692



## 5004

Gly Thr Leu Leu Lys Phe Leu Cys Lys Leu Gly Leu Phe Phe Ser Leu  
 1 5 10 15  
 Ser Cys Val Ser Arg Thr Val Gly Val Pro Gly Leu Leu Ser Cys Trp  
 20 25 30  
 Val Gln Ala Ser Arg Ile Leu Arg Arg Cys Glu Glu Glu Val Arg Lys  
 35 40 45  
 Ile Gly Gly Asn Arg Lys Glu Lys Glu Ile Trp Pro Arg Phe Trp Gly  
 50 55 60  
 Glu Lys Val Trp Gly Lys Ser Lys Gly Asn  
 65 70

<210> 5693  
 <211> 50  
 <212> PRT  
 <213> Homo sapiens

<400> 5693  
 Glu Asn Ala Cys Lys Ala Leu Gly Ile Val His Asp Val Asn Thr Gln  
 1 5 10 15  
 Met Leu Leu Lys Ser Ile Asn Val Asn Tyr Phe Leu Ala His Phe Ser  
 20 25 30  
 Gly Leu Ile Ser Pro Val Lys Met Ile His Ser Ile Leu Phe Asn Gly  
 35 40 45  
 Phe Met  
 50

<210> 5694  
 <211> 147  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (35)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (92)  
 <223> Xaa equals any of the naturally occurring L-amino acids

## 5005

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (134)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (140)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5694

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Gly | Cys | Ala | Leu | Ala | Gln | Val | Leu | Cys | Gly | Asp | Ala | Arg | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ile | Leu | Leu | Arg | Asp | Asp | Thr | Leu | Ser | Gly | Gln | His | Arg | Pro | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ile | Xaa | Ser | Leu | Ala | Thr | Ser | Leu | Ser | Pro | Ala | Ser | Pro | Ser | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Thr | Arg | Pro | Gln | Thr | Pro | Gly | Ser | Gly | Arg | Gly | Gly | Trp | Thr | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | His | Thr | Pro | Ala | Gly | Arg | Gly | Gln | Val | Pro | Arg | Ser | Pro | Met | Trp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Gly | Pro | Gly | Ala | Ala | Gln | Ala | Gly | Gly | Xaa | Asn | Trp | Gly | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Leu | Arg | Arg | Arg | Val | Lys | Ile | Ile | Lys | Gly | Ala | Thr | Glu | Ser |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Arg | Arg | Glu | Gly | Leu | Val | Pro | Asn | Ser | Cys | Ser | Pro | Gly | Asp | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Leu | Glu | Arg | Xaa | Pro | Pro | Arg | Trp | Ser | Xaa | Ser | Phe | Val | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |
|-----|-----|-----|
| Leu | Val | Arg |
| 145 |     |     |

&lt;210&gt; 5695

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5695

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Phe | Ser | Gly | Met | His | Arg | Phe | Ile | Ile | Phe | Ser | Thr | Leu | Lys | Met |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5006

|   |    |    |    |
|---|----|----|----|
| 1   | 5  | 10 | 15 |
| Arg Ala Phe Lys Ser Val His Tyr Leu Tyr Ser Pro Val Leu Ser Ile |    |    |    |
| 20  | 25 | 30 |    |
| Val Tyr Ile Ile Tyr Met Ile Lys Glu Asn Met His Asn Gln Thr Ser |    |    |    |
| 35  | 40 | 45 |    |
| Leu Asn Ile Val Phe Ala Pro Asp Glu Gln                         |    |    |    |
| 50  | 55 |    |    |

&lt;210&gt; 5696

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (22)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5696

|   |    |    |    |
|---|----|----|----|
| Thr Arg Cys Lys Arg Phe Val Asn Ser Leu Ala Pro Lys Leu Ser His |    |    |    |
| 1   | 5  | 10 | 15 |
| Trp Arg Arg Asp Phe Xaa His Tyr Ala Glu Ser Gly Trp Val Glu Phe |    |    |    |
| 20  | 25 | 30 |    |
| Arg Thr Ala Thr Leu Val Ala Glu Glu Leu His Gln Leu Gly Tyr Ser |    |    |    |
| 35  | 40 | 45 |    |
| Leu Ala Leu Gly Arg Glu   |    |    |    |
| 50  |    |    |    |

&lt;210&gt; 5697

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5697

|   |    |    |    |
|---|----|----|----|
| Gln Gln Phe Gly Arg Asp Gly Ser Pro Ala Ala Tyr Val Gly Gly Pro |    |    |    |
| 1   | 5  | 10 | 15 |
| Ser Val Gly Leu Arg Val Arg Val Ala Met Ala Val Asp Ile Thr Leu |    |    |    |
| 20  | 25 | 30 |    |
| Leu Phe Arg Ala Ser Val Lys Thr Val Lys Thr Arg Asn Lys Arg Trp |    |    |    |

## 5007

35

40

45

Glu Trp Arg Trp Ala Thr Gly Ser Met  
 50 55

&lt;210&gt; 5698

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5698

Gln Lys Ser Pro Ser Val Glu Asp Gly Leu Lys Gly Arg Asp Gln Thr  
 1 5 10 15

Xaa Met Asp Thr Asn Pro Lys Thr Glu Asp Ala Pro Cys Leu Pro His  
 20 25 30

Glu Ala Tyr Leu Ser Ala Cys Val Ser Met Ile Ala Gly Ile Glu Leu  
 35 40 45

Leu Gly Thr Ser Arg Met Ile Tyr Leu Ala Ile Cys Phe Leu His Ser  
 50 55 60

Lys Asn Gln Asn Gly Pro Val Ile Pro Asn Arg Glu Asn Arg Ala Asn  
 65 70 75 80

Ser Leu Phe Ser Pro Leu Pro Ser Glu Ala Ser Phe  
 85 90

&lt;210&gt; 5699

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (108)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5699

Gly Arg Gly Trp Gly Trp Glu Gly Thr Val Leu Pro Gly Glu Ala Glu  
 1 5 10 15

## 5008

Glu Asp Arg Val Gly Leu Arg Ala Arg Arg Arg Pro Ser Arg Leu Leu  
                   20                  25                  30  
 Ala Pro Leu Ala Trp Cys Pro Ala Pro Gly Arg Glu Ala Ala Gly Leu  
                   35                  40                  45  
 Asp Arg Ala Gly Leu Pro Gly Gly Ala Arg Ala Leu Ala Ala Gly Arg  
                   50                  55                  60  
 Pro Leu Leu Ser Ala Met Ala Gly Leu His Pro Trp Val Ile Phe Ser  
                   65                  70                  75                  80  
 Gly Pro Leu Trp Pro Leu Leu Thr Pro Arg Glu Gln Thr Thr Arg Thr  
                   85                  90                  95  
 Thr Gln Glu Gln Ile Lys Ser Arg Pro Gln Pro Xaa Arg Glu Arg Ala  
                   100                  105                  110  
 Ser Ile Leu Phe Ala Pro Arg Val Ala Val  
                   115                  120

&lt;210&gt; 5700

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (38)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (40)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5700

Ala Glu Leu Thr Pro Ser Ser Lys Leu Thr Val Asp Thr Asp Thr Leu  
           1                  5                  10                  15  
 Thr Pro Ser Ser Thr Leu Cys Glu Asn Ser Val Ser Glu Leu Leu Thr  
                   20                  25                  30  
 Pro Ala Lys Ala Glu Xaa Ser Xaa His Pro Asn Ser Asp Phe Phe Gly  
                   35                  40                  45  
 Gln Glu Gly Glu Thr Gln Phe Gly Phe Pro Asn Ala Ala Gly Asn His  
           50                  55                  60

## 5009

Gly Ser Gln Lys Glu Arg Asn Leu Ile Thr Val Thr Gly Ser Ser Phe  
 65 70 75 80

Leu Val

<210> 5701

<211> 316

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (14)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5701

Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Thr Gly Xaa Asn Asn  
 1 5 10 15

Thr Lys Ala Phe Glu Val Pro Ala Xaa Ala Asn Phe Leu Asn Ser Asn  
 20 25 30

Asp Val Phe Val Leu Lys Thr Gln Ser Cys Cys Tyr Leu Trp Cys Gly  
 35 40 45

Lys Gly Cys Ser Gly Asp Glu Arg Glu Met Ala Lys Met Val Ala Asp  
 50 55 60

Thr Ile Ser Arg Thr Glu Lys Gln Val Val Val Glu Gly Gln Glu Pro  
 65 70 75 80

Ala Asn Phe Trp Met Ala Leu Gly Gly Lys Ala Pro Tyr Ala Asn Thr  
 85 90 95

Lys Arg Leu Gln Glu Glu Asn Leu Val Ile Thr Pro Arg Leu Phe Glu  
 100 105 110

Cys Ser Asn Lys Thr Gly Arg Phe Leu Ala Thr Glu Ile Pro Asp Phe  
 115 120 125

Asn Gln Asp Asp Leu Glu Glu Asp Asp Val Phe Leu Leu Asp Val Trp  
 130 135 140

## 5010

Asp Gln Val Phe Phe Trp Ile Gly Lys His Ala Asn Glu Glu Glu Lys  
 145 150 155 160  
 Lys Ala Ala Ala Thr Thr Ala Gln Glu Tyr Leu Lys Thr His Pro Ser  
 165 170 175  
 Gly Arg Asp Pro Glu Thr Pro Ile Ile Val Val Lys Gln Gly His Glu  
 180 185 190  
 Pro Pro Thr Phe Thr Gly Trp Phe Leu Ala Trp Asp Pro Phe Lys Trp  
 195 200 205  
 Ser Asn Thr Lys Ser Tyr Glu Asp Leu Lys Ala Glu Leu Gly Asn Ser  
 210 215 220  
 Arg Asp Trp Ser Gln Ile Thr Ala Glu Val Thr Ser Pro Lys Val Asp  
 225 230 235 240  
 Val Phe Asn Ala Asn Ser Asn Leu Ser Ser Gly Pro Leu Pro Ile Phe  
 245 250 255  
 Pro Leu Glu Gln Leu Val Asn Lys Pro Val Glu Glu Leu Pro Glu Gly  
 260 265 270  
 Val Asp Pro Ser Arg Lys Glu Glu His Leu Ser Ile Glu Asp Phe Thr  
 275 280 285  
 Gln Ala Phe Gly Met Thr Pro Ala Ala Phe Ser Ala Leu Pro Arg Trp  
 290 295 300  
 Lys Gln Gln Asn Leu Lys Lys Glu Lys Gly Leu Phe  
 305 310 315

&lt;210&gt; 5702

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (58)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (84)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5011

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (85)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5702

Gly Lys Lys Glu Glu Asn Asn Pro Val Ser Leu Glu Val Gly Val Trp  
 1 5 10 15

Val Gly Thr Gly Asp Pro Gly Val Val Met Met Lys Thr Arg Ala Gly  
 20 25 30

Phe Gly Gly Arg Leu Arg Leu Phe Arg Ser Leu Leu Ser Pro Pro Pro  
 35 40 45

Ser Arg Ser Leu Pro Pro Pro Pro His Xaa Ser Ala Gly Lys Ala Ala  
 50 55 60

Cys Ala Ala Pro Gly Gly Glu Met Val Asp Ala His Glu Leu Cys Met  
 65 70 75 80

Trp Phe Leu Xaa Xaa Leu Ser Val Leu Gly Pro Val Phe Gly Gly Thr  
 85 90 95

Pro Lys Gly

&lt;210&gt; 5703

&lt;211&gt; 292

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5703

Leu Gln Ala Ile Pro Ala Lys Lys Ala Pro Leu Gln Leu Leu Ser Arg  
 1 5 10 15

Leu Cys Gly Asp His Leu Gln Ala Ile Pro Ala Lys Lys Ala Pro Ala  
 20 25 30

Gly Gln Glu Glu Pro Gly Thr Pro Pro Ser Ser Pro Leu Ser Ala Glu  
 35 40 45

Gln Leu Asp Arg Ile Gln Arg Asn Lys Ala Ala Ala Leu Leu Arg Leu  
 50 55 60

Ala Ala Arg Asn Val Pro Val Gly Phe Gly Glu Ser Trp Lys Lys His  
 65 70 75 80

Leu Ser Gly Glu Phe Gly Lys Pro Tyr Phe Ile Lys Leu Met Gly Phe



## 5012

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 85  |  | 90  |  | 95  |
| Val Ala Glu Glu Arg Lys His Tyr Thr Val Tyr Pro Pro Pro His Gln |     |  |     |  |     |
|   | 100 |  | 105 |  | 110 |
| Val Phe Thr Trp Thr Gln Met Cys Asp Ile Lys Asp Val Lys Val Val |     |  |     |  |     |
|   | 115 |  | 120 |  | 125 |
| Ile Leu Gly Gln Asp Pro Tyr His Gly Pro Asn Gln Ala His Gly Leu |     |  |     |  |     |
|   | 130 |  | 135 |  | 140 |
| Cys Phe Ser Val Gln Arg Pro Val Pro Pro Pro Pro Ser Leu Glu Asn |     |  |     |  |     |
|   | 145 |  | 150 |  | 155 |
| Ile Tyr Lys Glu Leu Ser Thr Asp Ile Glu Asp Phe Val His Pro Gly |     |  |     |  |     |
|   | 165 |  | 170 |  | 175 |
| His Gly Asp Leu Ser Gly Trp Ala Lys Gln Gly Val Leu Leu Leu Asn |     |  |     |  |     |
|   | 180 |  | 185 |  | 190 |
| Ala Val Leu Thr Val Arg Ala His Gln Ala Asn Ser His Lys Glu Arg |     |  |     |  |     |
|   | 195 |  | 200 |  | 205 |
| Gly Trp Glu Gln Phe Thr Asp Ala Val Val Ser Trp Leu Asn Gln Asn |     |  |     |  |     |
|   | 210 |  | 215 |  | 220 |
| Ser Asn Gly Leu Val Phe Leu Leu Trp Gly Ser Tyr Ala Gln Lys Lys |     |  |     |  |     |
|   | 225 |  | 230 |  | 235 |
| Gly Ser Ala Ile Asp Arg Lys Arg His His Val Leu Gln Thr Ala His |     |  |     |  |     |
|   | 245 |  | 250 |  | 255 |
| Pro Ser Pro Leu Ser Val Tyr Arg Gly Phe Phe Gly Cys Arg His Phe |     |  |     |  |     |
|   | 260 |  | 265 |  | 270 |
| Ser Lys Thr Asn Glu Leu Leu Gln Lys Ser Gly Lys Lys Pro Ile Asp |     |  |     |  |     |
|   | 275 |  | 280 |  | 285 |
| Trp Lys Glu Leu   |     |  |     |  |     |
|   | 290 |  |     |  |     |

&lt;210&gt; 5704

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5704

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Arg | Cys | Val | Asp | Leu | Asp | Gly | Arg | Cys | Asp | Met | Leu | Val | Phe |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

## 5013

Leu Thr Cys Ile Tyr Leu Arg His Cys Tyr Arg Asp Thr Val Val Thr  
                   20                                  25                                  30  
 Phe Trp Gly Thr Val Phe Gly Glu Arg Gly Val His Leu Asp Leu Cys  
                   35                                  40                                  45  
 Gly Thr Val Gln Ile Val Met Trp Leu His Arg Lys Pro Cys Ala Lys  
                   50                                  55                                  60  
 Asn Lys Leu His Leu Lys Asn Ile Lys Asn Leu Arg Phe Met Cys Phe  
                   65                                  70                                  75                                  80  
 Leu Ser Phe Ser Leu Arg Lys Gln Lys Ser Ser Gly Leu Arg Tyr Leu  
                                   85                                  90                                  95  
 Thr Leu His Val Lys Thr Leu  
                                   100

&lt;210&gt; 5705

&lt;211&gt; 173

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (131)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (146)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (154)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (157)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5705

Ala Ser Met Ala Thr Ala Ala Thr Glu Glu Pro Phe Pro Phe His Gly  
           1                                  5                                  10                                  15

Leu Leu Pro Lys Lys Glu Thr Gly Ala Ala Ser Phe Leu Cys Arg Tyr

## 5014

|   |     |     |
|---|-----|-----|
| 20  | 25  | 30  |
| Pro Glu Tyr Asp Gly Arg Gly Val Leu Ile Ala Val Leu Asp Thr Gly |     |     |
| 35  | 40  | 45  |
| Val Asp Pro Gly Ala Pro Gly Met Gln Val Thr Thr Asp Gly Lys Pro |     |     |
| 50  | 55  | 60  |
| Lys Ile Val Asp Ile Ile Asp Thr Thr Gly Ser Gly Asp Val Asn Thr |     |     |
| 65  | 70  | 75  |
| Ala Thr Glu Val Glu Pro Lys Asp Gly Glu Ile Val Gly Leu Ser Gly |     |     |
| 85  | 90  | 95  |
| Arg Val Leu Lys Ile Pro Ala Ser Trp Thr Asn Pro Ser Gly Lys Tyr |     |     |
| 100   | 105 | 110 |
| His Ile Gly Ile Lys Asn Gly Tyr Asp Phe Tyr Pro Lys Ala Leu Lys |     |     |
| 115   | 120 | 125 |
| Glu Arg Xaa Gln Lys Glu Arg Lys Glu Lys Ile Trp Asp Pro Val His |     |     |
| 130   | 135 | 140 |
| Arg Xaa Ala Leu Ala Glu Ala Cys Arg Xaa Gln Glu Xaa Phe Asp Val |     |     |
| 145   | 150 | 155 |
| Ala Asn Asn Gly Ser Ser Gln Ala Asn Lys Leu Ile Lys             |     |     |
| 165   | 170 |     |

&lt;210&gt; 5706

&lt;211&gt; 77

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5706

|   |    |    |
|---|----|----|
| Thr Leu Val Ala Glu Ala Thr Met Asp Leu Leu Leu Gly Asp Ser Trp |    |    |
| 1   | 5  | 10 |
| Gly Ser Pro Arg Pro Pro Arg Ala Glu Arg Gly Asp Glu Glu Phe Gly |    |    |
| 20  | 25 | 30 |
| Thr Val Gly Glu Glu Met Gly Arg Asp Gly Ile Ser Gly Ser Gln Ser |    |    |
| 35  | 40 | 45 |
| Gly Trp Asp Thr His Ala Gln Leu Leu His Trp Trp Gly Val Gly His |    |    |
| 50  | 55 | 60 |
| Thr Leu Phe Leu Thr Gly His Asp Leu Gln Glu Glu Lys             |    |    |
| 65  | 70 | 75 |

## 5015

&lt;210&gt; 5707

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5707

Ile Gln His Leu Met Gln Val Ser Ser Trp Val Val Phe Gln Leu Val  
1 5 10 15

Trp Asn Ser Leu Val Leu Thr Gln Thr Gly Ile Lys His Tyr Phe Arg  
20 25 30

Phe Ser Leu Cys Gln Phe Leu Ser Ser Tyr Asn His Val Asn Gln Asp  
35 40 45

Val Arg Thr Ser Ile  
50

&lt;210&gt; 5708

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5708

Gln Pro Gln Cys Pro Ala Ser Leu Thr Ser Ser Phe Leu Cys Pro Leu  
1 5 10 15

Cys Gly Ser Leu Leu Leu Val Ser Ala Phe Ser Met Leu Arg Thr Lys  
20 25 30

Ser Pro Ile His Cys Leu Cys Ser Arg Lys Leu Gln Lys Asn Lys Glu  
35 40 45

Pro Asn Tyr Gln Asn His Ile Lys Ser Pro Leu Phe Cys Leu Gly Ile  
50 55 60

&lt;210&gt; 5709

&lt;211&gt; 39

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5016

&lt;400&gt; 5709

Ala Ala Phe Phe Leu Leu Arg Leu Ser Leu Phe Val Leu Leu Pro Lys  
 1 5 10 15

Arg Gln Leu Pro Glu Phe Gly Cys Leu Asn Tyr Asn Leu Cys Arg Asn  
 20 25 30

Ser Ser Val Asn Thr Phe Lys  
 35

&lt;210&gt; 5710

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5710

Gln Leu Gln Leu Phe Cys Leu Gly Phe Gln Leu Phe Leu Val Arg Val  
 1 5 10 15

Cys Ser Leu Met Ile Trp Ile Tyr Phe Ala Phe Ile Phe Gln Arg Leu  
 20 25 30

His Leu Ile Pro Gly Lys Ser Ser Ala Arg Gln Val Ser Gly Phe Ser  
 35 40 45

Leu Leu Ser Phe Asn Pro Ser Asn Thr Ile Phe Val Lys Leu Asp Trp  
 50 55 60

Trp Cys Phe Ile Gln Leu Ile Tyr Ser Ala Tyr Leu Phe Glu Lys Arg  
 65 70 75 80

Leu Leu Glu Ile Asp Asp Val Phe Val Pro Val Ile Leu Lys Val Val  
 85 90 95

Gly Ala Arg Ile Glu Phe His Ser Gly Ile Gly Phe Gly Ser Gly Leu  
 100 105 110

&lt;210&gt; 5711

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5711

Trp Val Met Glu Tyr Asn Leu Glu Lys Lys Arg Asn Lys Arg Asp Cys

## 5017

|   |    |    |    |
|---|----|----|----|
| 1   | 5  | 10 | 15 |
| Val Ser Pro Cys Cys Pro Gly Trp Ser Arg Thr Ser Glu Leu Lys Gln |    |    |    |
|   | 20 | 25 | 30 |
| Ser Thr Leu Leu Ser Leu Gln Lys Cys Trp Asp Tyr Arg His Glu Thr |    |    |    |
|   | 35 | 40 | 45 |
| Pro Ser Pro Ala Ile Arg Phe Leu Phe Tyr Ile Tyr Met Lys         |    |    |    |
|   | 50 | 55 | 60 |

&lt;210&gt; 5712

&lt;211&gt; 194

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (101)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (113)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (173)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (192)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5712

|   |    |    |    |
|---|----|----|----|
| Pro Met Arg Arg Pro Arg Gly Glu Pro Gly Pro Arg Ala Pro Arg Pro |    |    |    |
| 1   | 5  | 10 | 15 |
| Thr Glu Gly Ala Thr Cys Ala Gly Pro Gly Glu Ser Trp Ser Pro Ser |    |    |    |
|   | 20 | 25 | 30 |
| Pro Asn Ser Met Leu Arg Val Leu Leu Ser Ala Gln Thr Ser Pro Ala |    |    |    |
|   | 35 | 40 | 45 |
| Arg Leu Ser Gly Leu Leu Leu Ile Pro Pro Val Gln Pro Cys Cys Leu |    |    |    |
|   | 50 | 55 | 60 |

## 5018

Gly Pro Ser Lys Trp Gly Asp Arg Pro Val Gly Gly Gly Pro Ser Ala  
 65 70 75 80  
 Gly Pro Val Gln Gly Leu Gln Arg Leu Leu Glu Gln Ala Lys Ser Pro  
 85 90 95  
 Gly Glu Leu Leu Xaa Trp Leu Gly Gln Asn Pro Ser Lys Val Arg Ala  
 100 105 110  
 Xaa His Tyr Ser Val Ala Leu Arg Arg Leu Gly Gln Leu Leu Gly Ser  
 115 120 125  
 Arg Pro Arg Pro Pro Pro Val Glu Gln Val Thr Leu Gln Asp Leu Ser  
 130 135 140  
 Gln Leu Ile Ile Arg Asn Cys Pro Ser Phe Asp Ile His Thr Ile His  
 145 150 155 160  
 Val Cys Leu His Leu Ala Val Leu Leu Gly Phe Pro Xaa Asp Gly Pro  
 165 170 175  
 Leu Val Cys Ala Leu Glu Gln Glu Pro Lys Leu Arg Leu Leu Arg Xaa  
 180 185 190  
 His Leu

&lt;210&gt; 5713

&lt;211&gt; 275

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (22)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (101)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5713

Arg Trp Ala Thr Tyr Gly Arg Thr Gly Gly Leu Pro Asn Val Gly Lys

## 5019

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ser Ser Thr Ile Asn Xaa Ile Met Gly Asn Lys Lys Val Ser Val Ser | 20  | 25  | 30  |
| Ala Thr Pro Gly His Thr Lys His Phe Gln Thr Leu Tyr Val Xaa Pro | 35  | 40  | 45  |
| Gly Leu Cys Leu Cys Asp Cys Pro Gly Leu Val Met Pro Ser Phe Val | 50  | 55  | 60  |
| Ser Thr Lys Ala Glu Met Thr Cys Ser Gly Ile Leu Pro Ile Asp Gln | 65  | 70  | 75  |
| Met Arg Asp His Val Pro Pro Val Ser Leu Val Cys Gln Asn Ile Pro | 85  | 90  | 95  |
| Arg His Val Leu Xaa Ala Thr Tyr Gly Ile Asn Ile Ile Thr Pro Arg | 100 | 105 | 110 |
| Glu Asp Glu Asp Pro His Arg Pro Pro Thr Ser Glu Glu Leu Leu Thr | 115 | 120 | 125 |
| Ala Tyr Gly Tyr Met Arg Gly Phe Met Thr Ala His Gly Gln Pro Asp | 130 | 135 | 140 |
| Gln Pro Arg Ser Ala Arg Tyr Ile Leu Lys Asp Tyr Val Ser Gly Lys | 145 | 150 | 155 |
| Leu Leu Tyr Cys His Pro Pro Pro Gly Arg Asp Pro Val Thr Phe Gln | 165 | 170 | 175 |
| His Gln His Gln Arg Leu Leu Glu Asn Lys Met Asn Ser Asp Glu Ile | 180 | 185 | 190 |
| Lys Met Gln Leu Gly Arg Asn Lys Lys Ala Lys Gln Ile Glu Asn Ile | 195 | 200 | 205 |
| Val Asp Lys Thr Phe Phe His Gln Glu Asn Val Arg Ala Leu Thr Lys | 210 | 215 | 220 |
| Gly Val Gln Ala Val Met Gly Tyr Lys Pro Gly Ser Gly Val Val Thr | 225 | 230 | 235 |
| Ala Ser Thr Ala Ser Ser Glu Asn Gly Ala Gly Lys Pro Trp Lys Lys | 245 | 250 | 255 |
| His Gly Asn Arg Asn Lys Lys Glu Lys Ser Arg Arg Leu Tyr Lys His | 260 | 265 | 270 |
| Leu Asp Met   |     |     |     |



## 5020

275

&lt;210&gt; 5714

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5714

His Glu Leu Glu His Thr Leu Val Met Ala Gly Pro Asn Ser Lys Arg  
 1 5 10 15

Gln Thr Gln Gly Val His Val Pro Arg Met Leu Gln Pro Ala Leu Gly  
 20 25 30

Pro Arg Val Ser His Glu Asp Trp Pro Pro Leu Cys Thr Gly Ala Arg  
 35 40 45

Gly Gly Gln Val Pro Val Leu Ala Arg Leu Leu Ala Ala Val Pro Thr  
 50 55 60

Glu Thr Thr Ala Leu Leu Cys Phe Pro Arg Arg Gly Ala Trp Leu Leu  
 65 70 75 80

Ala Val Arg Ala Gly Leu Phe Gln Lys Val Gly Pro Cys Pro  
 85 90

&lt;210&gt; 5715

&lt;211&gt; 47

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5715

Gly Gln Val Ala Ala Leu Ser Pro Arg Val Val Pro Gly Arg Leu Arg  
 1 5 10 15

Ser Ser Pro Lys Arg Gly Cys Ser Ser Gly Lys Gln Val Asn Ser Trp  
 20 25 30

Tyr Phe Thr Phe Leu Gly Asn Thr Xaa Asn Glu Asp Leu Gln Leu  
 35 40 45

## 5021

&lt;210&gt; 5716

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5716

Pro Lys Thr Val Ser Lys Met His Ile Lys Ser Ile Ile Leu Glu Gly  
1 5 10 15

Phe Lys Ser Tyr Ala Gln Arg Thr Glu Val Asn Gly Phe Asp Pro Leu  
20 25 30

Phe Asn Ala Ile Thr Gly Leu Asn Gly Ser Gly Lys Ser Asn Ile Leu  
35 40 45

Asp Ser Ile Cys Phe Leu Leu Gly Ile Ser Asn Leu Ser Gln Val Arg  
50 55 60

Ala Ser Lys Phe Thr Arg Phe  
65 70

&lt;210&gt; 5717

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5717

Pro Thr Tyr Gly Cys Trp Asp Asn Ser Pro Ser Arg Met Tyr Cys Cys  
1 5 10 15

Ser Ala Gln Asp Ser Lys Met Asp Tyr Lys Arg Arg Phe Leu Leu Gly  
20 25 30

Gly Ser Lys Gln Lys Val Gln Gln His Ser Asn Thr Arg Cys Leu Ser  
35 40 45

Trp Ala Glu His  
50

&lt;210&gt; 5718

&lt;211&gt; 136

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

## 5022

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5718

```

Phe Gly Thr Lys Glu Thr Val Asn Lys Asp Ile Cys Glu Lys Gly Thr
 1           5           10           15

Ile Gln Gln Met Ile Gly Ile Phe Lys Asn Ile Ile Ser Lys Pro Asn
          20           25           30

Glu Lys Glu Glu Ala Ile Val Leu Glu Ile Gln Ser Asp Ile Leu Leu
          35           40           45

Ile Leu Ser Gly Xaa Cys Glu Asn His Ile Gln Arg Lys Glu Ile Phe
          50           55           60

Gly Thr Glu Gly Val Asp Ile Val Leu His Val Met Lys Thr Asp Pro
          65           70           75           80

Arg Lys Leu Gln Ser Gly Leu Gly Tyr Asn Val Leu Leu Phe Ser Thr
          85           90           95

Leu Asp Ser Ile Trp Cys Cys Ile Leu Gly Cys Tyr Pro Ser Glu Asp
          100          105          110

Tyr Phe Leu Glu Lys Glu Gly Ile Phe Leu Leu Leu Asp Leu Leu Ala
          115          120          125

Leu Asn Gln Lys Asn Ser Val Ile
          130          135

```

&lt;210&gt; 5719

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5719

```

Lys Ser Leu Gly Glu Lys Lys Ser His Thr Val Phe Leu Ala Ile Arg
 1           5           10           15

Ile Met Lys Thr Asn Phe Gly Glu Cys Glu Gln Leu Arg Gln Thr Gly
          20           25           30

His Arg Leu Gln Gly Leu Thr Ser Leu Thr Val Thr Asp Asn Leu Gly
          35           40           45

Met Asp Pro Thr Ala Asp Val Ser Lys Gly His Arg Gly Glu Leu Val
          50           55           60

```

## 5023

Thr Ser Asn  
65

<210> 5720

<211> 47

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5720

Leu Ile Arg Xaa Gln Ser Trp Ser Ser Thr Ala Val Ala Ala Ala Leu  
1 5 10 15

Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg Gly Leu Leu  
20 25 30

Gln Lys Gly Tyr Ile Ile Leu Ser Leu Val Ile Gln Arg Tyr Ser  
35 40 45

<210> 5721

<211> 100

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (26)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5721

Val Leu Leu Asn Trp Ile Ile Gln Tyr Tyr Gly Tyr Asn Val Ile Gln  
1 5 10 15

Tyr Tyr Gly Gly Ile Cys Val Ile Ile Xaa Ile Asn Asn Thr Gly Glu  
20 25 30

Ile Ser Gly Arg Gln Lys Ser Glu Met Ala Leu Thr Glu Phe Lys Ser  
35 40 45

Arg Cys Trp Glu Gly Ser Thr Pro Leu Gly Gly Cys Gly Gly Gly Ser  
50 55 60

Ile Ser Leu Pro Ser Pro Thr Tyr Gly Leu Cys Ile Pro Trp Leu Val

## 5024

65                                      70                                      75                                      80

Ala Pro Ser Ser Ile Phe Lys Ala Ser Ser Val Val Leu Pro Ile Ser

                                    85                                      90                                      95

Leu Ile Phe Leu

                                    100

&lt;210&gt; 5722

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5722

Ala Arg Ala Glu Ile Gly Phe Leu Glu Gly Ser Ser Gly Lys Trp Pro

1                                      5                                      10                                      15

Asp Ser Ile Leu Arg Leu Cys Met Thr Ser Arg Tyr Tyr Pro Val Gly

                                    20                                      25                                      30

Val Pro Trp Gly Ala Met Ala Ala Ile Arg Cys Arg Leu Gly Tyr Ile

                                    35                                      40                                      45

Lys Trp Ala Glu Gly Thr Cys Leu Gly Arg Trp Gly Gly Leu Gln

                                    50                                      55                                      60

&lt;210&gt; 5723

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5723

Phe Met Ile Leu Xaa Tyr Lys Ser Tyr Glu Phe Leu Glu Leu Gln Lys

1                                      5                                      10                                      15

Trp Pro Gly Val Val Ala His Thr Val Asn Pro Gly Thr Leu Gly Gly

                                    20                                      25                                      30

Gln Gly Arg Arg Thr Thr

                                    35

## 5025

&lt;210&gt; 5724

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (37)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (73)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (89)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5724

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Glu | Glu | Val | Tyr | Ile | Trp | Val | Ser | Phe | Leu | His | Pro | Val | Glu | Ser |
| 1   |     |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Arg | Lys | Ser | Gly | Pro | Ile | Leu | Ser | Cys | Ser | Phe | Thr | Glu | Lys | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Pro | Phe | Xaa | Phe | Leu | Leu | Asn | Glu | Leu | Trp | Ser | Pro | Asp | Leu |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Cys | Lys | Gly | Gln | Pro | Asp | Pro | Pro | Phe | Met | His | Ser | Pro | Ser | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Leu | Val | Ala | Trp | Leu | Glu | Xaa | Ser | Gly | Ile | Phe | Glu | Phe | Trp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Pro | Leu | Gln | Leu | Ser | Trp | Gly | Pro | Xaa | Gly | Gly | Leu | Pro | Pro | Leu |  |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |  |

&lt;210&gt; 5725

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5725

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Glu | Gly | Val | Ser | Thr | Ala | Pro | Ser | Gln | Lys | Phe | Tyr | Ile | Phe | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 5026

Arg Gly Lys Lys Thr Leu Tyr Thr Met Ala Arg Pro Phe Leu Ser Gln  
                   20                  25                  30

Lys Ala Gly Pro Thr Glu Gln Phe Lys Leu Cys Ser Ser Arg Leu Lys  
                   35                  40                  45

Ala Gly Phe Val Glu Glu Leu Gln Leu Leu Ser Arg Ala Asn Pro Val  
                   50                  55                  60

Val Ile Gln Gly Glu Cys Lys Leu Ala Ser Leu Asp Arg Asp Gln Ser  
                   65                  70                  75                  80

<210> 5726  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<400> 5726  
 Ile Gln Ile Asn Phe His Ala His Leu Tyr Leu Lys Asp Ser Asp Phe  
   1                  5                  10                  15

Ser Leu Ser Gln Leu Arg Asn Ile Arg Leu Asn Pro Ala Val Leu Gln  
                   20                  25                  30

Met Phe Leu Leu Arg Leu Lys His Gln Leu Ile Asn Arg Tyr Leu Phe  
                   35                  40                  45

Ile Phe Asn  
                   50

<210> 5727  
 <211> 38  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (2)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5727  
 Pro Xaa Ser Ser Trp Asp Tyr Arg His Thr Pro Pro Cys Pro Ala His  
   1                  5                  10                  15

## 5027

Phe Cys Ile Phe Ser Arg Asp Gly Val Ser Pro Cys Trp Pro Gly Trp  
                   20                                  25                                  30

Leu His Leu Leu Thr Leu  
                   35

<210> 5728

<211> 112

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (109)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5728

Ser Lys Asp Gly Ala Xaa Cys Xaa Lys Ser Lys Asp Leu Leu Lys Gln  
   1                                  5                                  10                                  15

Arg Tyr Leu Phe Ala Lys Ala Gly Tyr Pro Leu Arg Arg Ser Gln Ser  
                   20                                  25                                  30

Leu Pro Thr Thr Leu Leu Ser Pro Val Arg Val Val Ser Ser Val Asn  
                   35                                  40                                  45

Val Arg Leu Ser Pro Gly Lys Glu Thr Arg Cys Ser Pro Pro Ser Phe  
                   50                                  55                                  60

Thr Tyr Lys Tyr Thr Pro Glu Glu Glu Gln Glu Leu Glu Lys Arg Val  
   65                                  70                                  75                                  80

Met Glu His Asp Gly Gln Ser Leu Val Lys Ser Thr Ile Phe Ile Ser  
                                   85                                  90                                  95

Pro Ser Ser Val Lys Lys Glu Glu Ala Pro Gln Ser Xaa Ala Pro Arg  
                   100                                  105                                  110



5028

&lt;210&gt; 5729

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5729

Ile Leu Phe Ala Pro Pro Arg Phe Ala Pro Glu Arg Gln Ser Ser Ser  
1 5 10 15

Arg Gly Pro Leu Arg His Arg Tyr Ser Ser Gln Ile Xaa Thr His Phe  
20 25 30

Thr Ala Thr Pro Gly Ile Leu Pro Pro Leu Arg Asp Ser Ser Leu Pro  
35 40 45

Val Ser Asp Ala Val Pro Arg Leu Ser Pro Gly Ile Ser His Leu Thr  
50 55 60

&lt;210&gt; 5730

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5730

Ser Leu Ser Ala Pro Glu Leu Lys Ser Leu Ala Lys Thr Phe His Leu  
1 5 10 15

Val Asn Pro Asn Gly Gln Lys Gln Gln Leu Val Asp Ala Phe Leu Lys  
20 25 30

Leu Ala Lys Gln Arg Ser Val Cys Thr Trp Gly Lys Asn Lys Pro Gly  
35 40 45

Ile Gly Ala Val Ile Leu Lys Arg Phe Cys Trp Leu Leu Leu Gln  
50 55 60

## 5029

&lt;210&gt; 5731

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (40)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (64)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5731

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Met | Ser | His | Lys | Glu | Arg | His | Phe | Glu | Leu | Leu | Leu | Lys | Ser | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Val | Ser | Tyr | Pro | Gly | Thr | Val | Phe | Leu | Asn | Gly | Asn | Val | Met | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Cys | Ser | Ile | Thr | Thr | Xaa | Gly | Leu | Val | His | Gln | Val | Pro | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Pro | Leu | Gln | Ala | Leu | Gly | Ser | Gly | Met | Cys | Pro | Ser | Trp | Lys | Xaa |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Val | Leu | Trp | Leu | Cys | Trp | Phe | Trp | Leu | Ser | Phe | Ser | Val | Thr | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Tyr | Leu | Ser | Pro | Ser | Arg | Tyr | Cys | Lys | Pro | Leu | Ser | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |

&lt;210&gt; 5732

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5732

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Xaa | Gly | Phe | Trp | Pro | Ala | Ser | Val | Ala | Arg | Val | Leu | Thr | Gly | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 5030

Thr Asn His Leu Ala Phe Asn Thr Lys Lys Pro His Ile Leu Arg Asn  
                   20                                  25                                  30  
 Pro Arg Thr Gln Lys Val Leu Gly Phe Val Ser Asp Ala Glu Gly Trp  
                   35                                  40                                  45  
 Val Glu Ser Met Lys Pro Thr Gln Arg Asp Asp Ser Thr Ile Cys Ser  
                   50                                  55                                  60  
 Ile Gly Trp Lys Trp Arg Gly  
                   65                                  70

<210> 5733  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 5733  
 His Gln Trp Arg Gly Ala Leu His Ile Leu Cys Gln Gln Gln His Ser  
   1                                  5                                  10                                  15  
 His Thr Arg Trp Phe Trp Ala Leu Cys Arg Leu Val Leu Val Gly Asp  
                   20                                  25                                  30  
 Thr Gln Gln His Pro Cys Trp Thr Gly Leu Ile Val Arg Ser Leu Arg  
                   35                                  40                                  45  
 Pro Thr Leu Gln Ser Glu Met Leu Leu Gly Gly Gly Lys Glu Asn Thr  
                   50                                  55                                  60  
 Phe Phe Pro Pro Cys Gly Asn Glu Glu Arg Gly Lys Trp Ile Gly Lys  
                   65                                  70                                  75                                  80  
 Pro Lys Cys Glu Ser  
                                   85

<210> 5734  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 5734  
 Phe Ser Leu Thr Leu Phe Pro Pro Pro Thr Cys His Gln Ala Ser Pro  
   1                                  5                                  10                                  15  
 Lys Pro Thr Ala Met Gly Pro Ser Gly Pro Phe Arg Asp Trp Ser Glu  
                   20                                  25                                  30

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ile | Trp | Val | Trp | Arg | Gly | Arg | Arg | Gln | Gly | Gly | Gly | Ala | Ser | His | Ser |  |
| 35  |     |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |  |
| Arg | Thr | Val | Asp | Glu | Arg | Asp | Arg | Leu | Arg | Arg | Lys | Trp | Ala | Leu | Arg |  |
| 50  |     |     |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |  |
| Leu | Gln | Gly | Trp | Lys | Ser | Leu | Pro | Thr | Ser | His | Ser | Pro | Ala | Pro | Ile |  |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |  |
| Tyr | Leu | Val | Leu | Pro | Arg | Gln | Ile | Gly | Pro | Phe | Glu | Ala | Pro | Glu | Cys |  |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     |     | 95  |  |
| Pro | Gln | Met | Val | Lys | Thr | Gln | Phe | Ser | Leu | Trp | Glu | Pro | Lys | Pro | Gly |  |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |     | 110 |  |
| Cys | Ile | Gly | Gly | Gln | Asp | Pro | Asp | His | Ser | Leu |     |     |     |     |     |  |
| 115 |     |     |     |     |     | 120 |     |     |     |     |     |     |     |     |     |  |

```
<220>
<221> SITE
<222> (20)
<223> Xaa equals any of the naturally occurring L-amino acids
```

```
<220>
<221> SITE
<222> (32)
<223> Xaa equals any of the naturally occurring L-amino acids
```

```
:220>
:221> SITE
:222> (34)
:223> Xaa equals any of the naturally occurring L-amino acids
```

```

400> 5735
ys Cys Pro Ile Ala Ser Glu Ala Pro Trp Thr Ile Thr Asp Ala Glu
1          5          10          15
u Arg Val Xaa Leu Thr Val Glu Asp Ser Gln Pro Tyr Glu Asp Xaa
20          25          30
u Xaa Gly Arg Ser Ser Leu Ser Lys Val
35          40

```

## 5032

&lt;210&gt; 5736

&lt;211&gt; 34

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5736

Tyr Pro Thr His Tyr Arg Glu Ser Trp Tyr Ala Cys Arg Tyr Arg Ser  
 1 5 10 15

Gly Ile Pro Gly Ser Thr His Ala Ser Gly Ile Leu Gly Leu Arg Phe  
 20 25 30

Phe Met

&lt;210&gt; 5737

&lt;211&gt; 202

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (167)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (195)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5737

Tyr Ser Arg Pro Gln Ala His Ser Ser Ala Ser Gly Gly Ile Arg Arg  
 1 5 10 15

Ser Ser Ser Met Ser Tyr Val Asp Gly Phe Ile Gly Thr Trp Pro Lys  
 20 25 30

Glu Lys Arg Ser Ser Val His Gly Val Ser Phe Asp Ile Ser Phe Asp  
 35 40 45

Lys Glu Asp Ser Val Gln Arg Ser Thr Pro Asn Arg Gly Ile Thr Arg  
 50 55 60

Ser Ile Ser Asn Glu Gly Leu Thr Leu Asn Asn Ser His Val Ser Lys  
 65 70 75 80

Iis Ile Arg Lys Asn Leu Ser Phe Lys Pro Ile Asn Gly Glu Glu Glu

## 5033

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 85  |     | 90  |     | 95  |
| Ala Glu Ser Ile Glu Glu Glu Leu Asn Ile Asp Ser His Ser Asp Leu |     |     |     |     |     |
|   | 100 |     | 105 |     | 110 |
| Lys Ser Cys Val Pro Leu Asn Thr Asn Glu Leu Asn Ser Asn Glu Asn |     |     |     |     |     |
|   | 115 |     | 120 |     | 125 |
| Ile His Tyr Lys Leu Pro Asn Gly Ala Leu Gln Asn Arg Ile Leu Leu |     |     |     |     |     |
|   | 130 |     | 135 |     | 140 |
| Asp Glu Phe Gly Asn Gln Ile Glu Thr Pro Ser Ile Glu Glu Ala Leu |     |     |     |     |     |
|   | 145 |     | 150 |     | 155 |
| Gln Ile Ile His Asp Thr Xaa Lys Ser Pro His Thr Pro Gln Pro Asp |     |     |     |     |     |
|   |     | 165 |     | 170 | 175 |
| Gln Ile Ala Asn Gly Phe Phe Leu His Ser Gln Gly Met Ser Ile Leu |     |     |     |     |     |
|   | 180 |     | 185 |     | 190 |
| Asn Ser Xaa Ile Lys Leu Asn Gln Ser Ser                         |     |     |     |     |     |
|   | 195 |     | 200 |     |     |

<210> 5738  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

<400> 5738  
 Gly Arg Ile Ser His Val Gly Ser Arg Thr Glu Gly Ser Arg Leu Pro  
 1 5 10 15  
 Ala Gln Cys Ser Leu Cys Ser Thr Met Leu Pro Leu Val Gly Glu Thr  
 20 25 30  
 Gly Gln Lys  
 35

<210> 5739  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

<400> 5739  
 Val Trp Gly Lys Lys Ala Val Ser Arg Gly Phe Ser Lys Gly Asn Thr  
 1 5 10 15

## 5034

Gln Met Ala Lys Lys His Met Gln Arg Cys Ser Met Phe Phe Val Ile  
                   20                                  25                                  30

Arg Lys Met  
                   35

<210> 5740  
 <211> 220  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (65)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (96)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (117)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5740  
 Glu Lys Thr Ile Leu Thr Gly Glu Cys Cys Tyr Leu Asn Pro Leu Leu  
   1                  5                                  10                                  15

Arg Arg Ile Ile Arg Phe Thr Gly Val Phe Ala Phe Gly Leu Phe Ala  
                   20                                  25                                  30

Thr Asp Ile Phe Val Asn Ala Gly Gln Val Val Thr Gly His Leu Thr  
                   35                                  40                                  45

Pro Tyr Phe Leu Thr Val Cys Lys Pro Asn Tyr Thr Ser Ala Asp Cys  
                   50                                  55                                  60

Xaa Ala His His Gln Phe Ile Asn Asn Gly Asn Ile Cys Thr Gly Asp  
   65                                  70                                  75                                  80

Arg Glu Val Ile Glu Lys Ala Arg Arg Ser Phe Pro Ser Lys His Xaa  
                   85                                  90                                  95

Ala Leu Ser Ile Tyr Ser Ala Leu Tyr Ala Thr Met Tyr Ile Thr Ser  
                   100                                  105                                  110

Thr Ile Lys Thr Xaa Ser Ser Arg Leu Ala Lys Pro Val Leu Cys Leu

## 5035

|   |         |         |
|---|---------|---------|
| 115   | 120     | 125     |
| Gly Thr Leu Cys Thr Ala Phe Leu Thr Gly Leu Asn Arg Val Ser Glu |         |         |
| 130   | 135     | 140     |
| Tyr Arg Asn His Cys Ser Asp Val Ile Ala Gly Phe Ile Leu Gly Thr |         |         |
| 145   | 150     | 155 160 |
| Ala Val Ala Leu Phe Leu Gly Met Cys Val Val His Asn Phe Lys Gly |         |         |
|   | 165 170 | 175     |
| Thr Gln Gly Ser Pro Ser Lys Pro Lys Pro Glu Asp Pro Arg Gly Val |         |         |
|   | 180 185 | 190     |
| Pro Leu Met Ala Phe Pro Arg Ile Glu Ser Pro Leu Glu Thr Leu Ser |         |         |
|   | 195 200 | 205     |
| Ala Gln Asn His Ser Ala Ser Met Thr Glu Val Thr                 |         |         |
| 210   | 215     | 220     |

<210> 5741  
 <211> 38  
 <212> PRT  
 <213> Homo sapiens

<400> 5741  
 Lys Thr Phe Arg Leu Phe Leu Ala Ile Ser Leu Thr Phe Ala Thr Ile  
 1 5 10 15  
 Val Thr Lys His Ser Leu Tyr Met His Pro Pro Asn Val Ser Cys Leu  
 20 25 30  
 Phe Ile Gly Lys Leu Tyr  
 35

<210> 5742  
 <211> 59  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (14)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE



## 5036

&lt;222&gt; (23)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (57)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5742

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Gln | Gly | His | Trp | Pro | Gly | Pro | His | Leu | Pro | Ser | Ser | Xaa | Leu | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Arg | Lys | Leu | Pro | Trp | Xaa | Ser | Arg | Pro | Leu | Asn | Ala | Asn | Ser | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Val | Ser | Gly | Trp | Val | Asp | Leu | Thr | Trp | Pro | Leu | Leu | Ala | Gly |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Cys | Ser | Phe | Leu | Thr | Cys | Arg | Xaa | Glu | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     |

&lt;210&gt; 5743

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5743

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Leu | Val | Ala | Gly | Asp | Ile | Val | Leu | Asp | Lys | Leu | Gly | Glu | Arg | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ile | Leu | Leu | Lys | Val | Arg | Asp | Met | Val | Ser | Ser | His | Val | Glu | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Phe | Gln | Ile | Tyr | Glu | Gln | His | Ala | Asp | Thr | Val | Gly | Ile | Asp | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Gln | Pro | Ser | Ala | Val | Ser | Pro | Ser | Val | Ala | Asp | Met | Leu | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Leu | Gln | Asp | Ile | Glu | Arg | His | Tyr | Arg | Lys | Ser | Tyr | Leu | Lys | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Tyr | Leu | Leu | Ser | Ser | Ile | Gln | Trp | Gly | Asp | Leu | Ala | Asn | Ile | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

## 5037

Ala Leu Pro Lys Ala Trp Asp Arg Ile Ser Lys Asp Glu His Gln Asp  
                   100                  105                  110

Leu Val Gln Asp Ile Leu Leu Asn Val Ser  
                   115                  120

<210> 5744

<211> 66

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5744

Thr Xaa Asn Phe His Xaa Arg Xaa Glu Val Ile Asn Ser Gly His Gln  
   1                  5                  10                  15

Arg Ile Leu Ala Ser Ala Leu Gly Leu Val Met Tyr Gln Val Trp Tyr  
                   20                  25                  30

Tyr Phe Leu Phe Val Leu Ile Arg Phe Leu Pro Ser Ser Ser Ile Trp  
                   35                  40                  45

Glu Ile Lys Thr Gly Leu Leu Ala Trp Leu Val Thr Glu Arg Gln Ala  
                   50                  55                  60

His Ser  
   65

<210> 5745

<211> 59

<212> PRT

<213> Homo sapiens

## 5038

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5745

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Phe | Pro | Pro | Arg | Asn | Ser | Pro | Arg | Leu | Lys | Thr | Xaa | Leu | His | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Val | Met | Arg | Cys | Glu | Gly | Gly | Ser | Leu | Lys | Val | Glu | Asn | Leu | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Glu | Ala | Thr | Val | Pro | Ser | Trp | Xaa | Leu | Ser | Phe | Leu | Ile | Cys | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Val | Asn | Val | Lys | Leu | Leu | Cys | Lys | Met |
|     |     | 50  |     |     |     | 55  |     |     |     |     |

&lt;210&gt; 5746

&lt;211&gt; 117

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (111)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5746

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Thr | Leu | Leu | Ser | Cys | Glu | Ala | His | His | Leu | Ser | Leu | Ala | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Ser | Cys | Arg | Arg | Ser | Leu | Gly | Pro | Leu | Met | His | Pro | Phe | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Thr | Phe | His | Phe | Gly | Val | Arg | Xaa | Asp | Phe | Leu | Ala | Leu | Gln | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

## 5039

Ala Pro Ala Ser Ser Cys Ile Pro Cys Pro Gly Pro Gly Ile Ser Pro  
 50 55 60

Phe Ser Lys Glu Pro Arg Val Leu Leu Leu Ala Ser Leu Lys Arg Val  
 65 70 75 80

Arg Pro Gly Cys Gln Ala Gly Ser Pro Arg Ser Phe Tyr Trp Glu Val  
 85 90 95

Leu Glu Ser Glu Ala Trp Val Pro Gly Gly Cys Gln Val Gly Xaa Val  
 100 105 110

Leu Leu Gly Cys Cys  
 115

&lt;210&gt; 5747

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5747

Leu Thr Leu Thr Lys Gly Asn Lys Ser Trp Gly Ser Thr Ala Val Thr  
 1 5 10 15

Ala Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg  
 20 25 30

Gly Leu Val Arg Val Phe Phe Phe Phe Phe Phe Lys Thr Asn Thr Phe  
 35 40 45

Ile Ala His Leu  
 50

&lt;210&gt; 5748

&lt;211&gt; 270

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (266)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5748

Thr Leu Glu Gln Glu Gln Glu Ala Leu Val Asn Arg Leu Trp Lys Arg  
 1 5 10 15

## 5040

Met Asp Lys Leu Glu Ala Glu Lys Arg Ile Leu Gln Glu Lys Leu Asp  
                   20                  25                  30

Gln Pro Val Ser Ala Pro Pro Ser Pro Arg Asp Ile Ser Met Glu Ile  
                   35                  40                  45

Asp Ser Pro Glu Asn Met Met Arg His Ile Arg Phe Leu Lys Asn Glu  
           50                  55                  60

Val Glu Arg Leu Lys Lys Gln Leu Arg Ala Ala Gln Leu Gln His Ser  
   65                  70                  75                  80

Glu Lys Met Ala Gln Tyr Leu Glu Glu Glu Arg His Met Arg Glu Glu  
                   85                  90                  95

Asn Leu Arg Leu Gln Arg Lys Leu Gln Arg Glu Met Glu Arg Arg Glu  
                   100                  105                  110

Ala Leu Cys Arg Gln Leu Ser Glu Ser Glu Ser Ser Leu Glu Met Asp  
           115                  120                  125

Asp Glu Arg Tyr Phe Asn Glu Met Ser Ala Gln Gly Leu Arg Pro Arg  
   130                  135                  140

Thr Val Ser Ser Pro Ile Pro Tyr Thr Pro Ser Pro Ser Ser Ser Arg  
  145                  150                  155                  160

Pro Ile Ser Pro Gly Leu Ser Tyr Ala Ser His Thr Val Gly Phe Thr  
                   165                  170                  175

Pro Pro Thr Ser Leu Thr Arg Ala Gly Met Ser Tyr Tyr Asn Ser Pro  
                   180                  185                  190

Gly Leu His Val Gln His Met Gly Thr Ser His Gly Ile Thr Arg Pro  
           195                  200                  205

Ser Pro Arg Arg Ser Asn Ser Pro Asp Lys Phe Lys Arg Pro Thr Pro  
   210                  215                  220

Pro Pro Ser Pro Asn Thr Gln Thr Pro Val Gln Pro Pro Pro Pro Pro  
  225                  230                  235                  240

Pro Pro Pro Pro Met Gln Pro Thr Val Pro Ser Ala Ala Thr Ser Gln  
                   245                  250                  255

Pro Thr Pro Ser Gln His Ser Ala His Xaa Ser Ser Gln Pro  
           260                  265                  270

## 5041

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5749

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ile | Gln | Val | Tyr | Thr | Ser | Val | Lys | Ile | Gln | Arg | Met | Tyr | Thr | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Cys | Ile | Ser | Leu | Tyr | Val | Asn | Val | Thr | Leu | Lys | Cys | Cys | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ile | Leu | Asn | Lys | Tyr | Thr | His | Ala | Lys | Val | Phe | Lys | Arg | Lys | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Cys | Leu | Gln | Asn | Lys | Asn | Phe | Phe | Ser | Ile | Phe | Cys | Gly | Lys | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |
|-----|-----|-----|
| Tyr | Ile | Ile |
| 65  |     |     |

&lt;210&gt; 5750

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5750

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Gly | Ser | Val | Gly | Val | Ser | Ser | Glu | Leu | His | Gln | Phe | Pro | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Leu | Gly | Pro | Trp | Ile | Thr | Leu | Arg | Ser | Ala | Thr | Cys | Gln | Leu | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Lys | Leu | Leu | Leu | Ala | Gly | Leu | Arg | Leu | Ser | Arg | Glu | His | Leu | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Pro | Cys | Ala | Ala | Gly | Trp | Thr | Pro | Ala | His | Leu | Ala | Asp | Tyr | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Phe | Cys | Ser | Pro | Val | Cys | Pro | Gln | Glu | Val | Arg | Ala | Cys | Leu | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | His | Asp | His | Gly | Arg | Arg | Gly | Thr | Asn | Met | Arg | Val | Leu | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Gln | Trp | Trp | Leu | Pro | Arg | Ala | Gly | Glu | Thr | Leu | Gly | Glu | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Gln | Gly | Pro | Leu | Ser | Leu | Ala | Ala | Thr | Ala | Trp | Val | Asn | Cys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

## 5042

Leu Ala Arg Leu Ala Ala Arg Ala Gln Lys Ala Glu Ala Leu Pro Ala  
 130 135 140

Phe Ser Ser His Pro Ala Pro Met  
 145 150

<210> 5751  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 5751  
 Arg Val Ala Val Glu Asp Val Ser Met Val Lys Gln Lys Asn Thr Thr  
 1 5 10 15

Phe Leu Trp Lys Glu Ile Leu Lys Gln Gln Ser Gln Ile Val Lys Met  
 20 25 30

Leu Arg Ile Ser Val Pro Pro Leu Thr Ser Val Ser Val Lys Pro Gln  
 35 40 45

Leu Gly Cys Thr Glu Asp Tyr Leu Leu Ser Lys Leu Pro Ser Asp Gly  
 50 55 60

Lys Glu Val Pro Phe Val Val Arg Lys Phe Lys Leu Ser Tyr Ile Gln  
 65 70 75 80

Pro Arg Thr Gln Glu Thr Pro Ser His Leu Glu Glu Leu Glu Gly Ser  
 85 90 95

Ala Gly

<210> 5752  
 <211> 92  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (81)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5752  
 Asp Arg Lys Arg Asp Leu Thr Ser Pro Trp Arg Leu Ser Val Ser Ala  
 1 5 10 15

## 5043

Glu Ala Leu Gly Leu Ala Leu Gly Leu Cys Ile Pro Glu Ser Cys Cys  
                   20                  25                  30  
 Met Pro Gly Ile Gly Phe Gln Ala Cys Leu Ser Phe Ser Ser Leu Pro  
                   35                  40                  45  
 Gly Ile Ala Met Arg Trp Glu Gly Glu Pro Ser Ser Pro Ala Glu Ile  
                   50                  55                  60  
 Pro Ala Ala Trp Gln Pro Ala Gly Gly Ser Trp Ile Pro Arg Gly Asp  
                   65                  70                  75                  80  
 Xaa Thr Asp Ala Leu Trp Phe His Val Ile Trp Ile  
                                   85                                  90

&lt;210&gt; 5753

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (74)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (81)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (84)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5753

Pro Arg Arg His Arg Val Pro Gly Ser Gly Phe Ala Phe Pro Lys Asn  
           1                  5                  10                  15



## 5044

Glu Asn Lys Leu Leu Pro Lys Glu Leu Val Phe Pro Leu Leu Phe Ser  
                   20                  25                  30  
 Asn Cys Glu Gly Pro Arg Gly Val Glu His Gly Ala Pro His Lys Pro  
           35                  40                  45  
 Xaa Gly Trp Cys Pro Gly Tyr Gln Gly His Ala Xaa Gly Leu Asp Asp  
       50                  55                  60  
 Leu Ser Leu Gln Gly Ala Leu Val Val Xaa Asn Trp Leu Lys Val Thr  
   65                  70                  75                  80  
 Xaa Glu Gly Xaa Cys Gly Asn Trp  
                   85

&lt;210&gt; 5754

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5754

Lys Ile Phe Ser Phe Ala Val Pro Asp Pro Leu Met Pro Asp Pro Xaa  
   1                  5                  10                  15

Lys Gln Pro Lys Asn Gln Leu Asn Pro Ile Gly Ser  
           20                  25

&lt;210&gt; 5755

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5755

Arg Met Asn Ile Cys Val Ser Val Cys Val Ser Glu Leu Cys Asp Phe  
   1                  5                  10                  15

Ile Arg Gly Ile Cys Gln Phe Ser His Cys Gly Ser Phe Ser Asp Phe  
           20                  25                  30

Ala Cys Ser Ser Ser Lys Glu Ala Arg Ser Phe Ala Asp Phe Thr Ile  
           35                  40                  45

## 5045

Pro Gln Thr Cys Lys Phe Leu Thr Ser Ser Lys Leu Ala Leu Ala Leu  
 50 55 60

Ser Ser Thr Phe Pro Phe Lys Ser Asn Leu Cys  
 65 70 75

<210> 5756  
 <211> 540  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (320)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (508)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5756  
 Thr Met Asp Glu Glu Lys Asp Asp Gly Glu Ala Lys Glu Ile Ser  
 1 5 10 15

Thr Pro Thr His Trp Ser Lys Leu Asp Pro Lys Thr Met Lys Val Asn  
 20 25 30

Asp Leu Arg Lys Glu Leu Glu Ser Arg Ala Leu Ser Ser Lys Gly Leu  
 35 40 45

Lys Ser Gln Leu Ile Ala Arg Leu Thr Lys Gln Leu Lys Val Glu Glu  
 50 55 60

Gln Lys Glu Glu Gln Lys Glu Leu Glu Lys Ser Glu Lys Glu Glu Asp  
 65 70 75 80

Glu Asp Asp Asp Arg Lys Ser Glu Asp Asp Lys Glu Glu Glu Glu Arg  
 85 90 95

Lys Arg Gln Glu Glu Ile Glu Arg Gln Arg Arg Glu Arg Arg Tyr Ile  
 100 105 110

Leu Pro Asp Glu Pro Ala Ile Ile Val His Pro Asn Trp Ala Ala Lys  
 115 120 125

Ser Gly Lys Phe Asp Cys Ser Ile Met Ser Leu Ser Val Leu Leu Asp  
 130 135 140

## 5046

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Arg | Leu | Glu | Asp | Asn | Lys | Glu | His | Ser | Phe | Glu | Val | Ser | Leu | Phe | 145 | 150 | 155 | 160 |
| Ala | Glu | Leu | Phe | Asn | Glu | Met | Leu | Gln | Arg | Asp | Phe | Gly | Val | Arg | Ile | 165 | 170 | 175 |     |
| Tyr | Lys | Ser | Leu | Leu | Ser | Leu | Pro | Glu | Lys | Glu | Asp | Lys | Lys | Glu | Lys | 180 | 185 | 190 |     |
| Asp | Lys | Lys | Ser | Lys | Lys | Asp | Glu | Arg | Lys | Asp | Lys | Lys | Glu | Glu | Arg | 195 | 200 | 205 |     |
| Asp | Asp | Glu | Thr | Asp | Glu | Pro | Lys | Pro | Lys | Arg | Arg | Lys | Ser | Gly | Asp | 210 | 215 | 220 |     |
| Asp | Lys | Asp | Lys | Lys | Glu | Asp | Arg | Asp | Glu | Arg | Lys | Lys | Glu | Asp | Lys | 225 | 230 | 235 | 240 |
| Arg | Lys | Asp | Asp | Ser | Lys | Asp | Asp | Asp | Glu | Thr | Glu | Glu | Asp | Asn | Asn | 245 | 250 | 255 |     |
| Gln | Asp | Glu | Tyr | Asp | Pro | Met | Glu | Ala | Glu | Glu | Ala | Glu | Asp | Glu | Glu | 260 | 265 | 270 |     |
| Asp | Asp | Arg | Asp | Glu | Glu | Glu | Met | Thr | Lys | Arg | Asp | Asp | Lys | Arg | Asp | 275 | 280 | 285 |     |
| Ile | Asn | Arg | Tyr | Cys | Lys | Glu | Arg | Pro | Ser | Lys | Asp | Lys | Glu | Lys | Glu | 290 | 295 | 300 |     |
| Lys | Thr | Gln | Met | Ile | Thr | Ile | Asn | Arg | Asp | Leu | Leu | Met | Ala | Phe | Xaa | 305 | 310 | 315 | 320 |
| Tyr | Phe | Asp | Gln | Ser | His | Cys | Gly | Tyr | Leu | Leu | Glu | Lys | Asp | Leu | Glu | 325 | 330 | 335 |     |
| Glu | Ile | Leu | Tyr | Thr | Leu | Gly | Leu | His | Leu | Ser | Arg | Ala | Gln | Val | Lys | 340 | 345 | 350 |     |
| Lys | Leu | Leu | Asn | Lys | Val | Val | Leu | Arg | Glu | Ser | Cys | Phe | Tyr | Arg | Lys | 355 | 360 | 365 |     |
| Leu | Thr | Asp | Thr | Ser | Lys | Asp | Glu | Glu | Asn | His | Glu | Glu | Ser | Glu | Ser | 370 | 375 | 380 |     |
| Leu | Gln | Glu | Asp | Met | Leu | Gly | Asn | Arg | Leu | Leu | Leu | Pro | Thr | Pro | Thr | 385 | 390 | 395 | 400 |
| Val | Lys | Gln | Glu | Ser | Lys | Asp | Val | Glu | Glu | Asn | Val | Gly | Leu | Ile | Val | 405 | 410 | 415 |     |

## 5047

Tyr Asn Gly Ala Met Val Asp Val Gly Ser Leu Leu Gln Lys Leu Glu  
                   420                  425                  430

Lys Ser Glu Lys Val Arg Ala Glu Val Glu Gln Lys Leu Gln Leu Leu  
                   435                  440                  445

Glu Glu Lys Thr Asp Glu Asp Glu Lys Thr Ile Leu Asn Leu Glu Asn  
                   450                  455                  460

Ser Asn Lys Ser Leu Ser Gly Glu Leu Arg Glu Val Lys Lys Asp Leu  
                   465                  470                  475                  480

Ser Gln Leu Gln Glu Asn Leu Lys Ile Ser Glu Asn Met Asn Leu Gln  
                                   485                  490                  495

Phe Glu Asn Gln Met Asn Lys Thr Ile Arg Asn Xaa Ser Thr Val Met  
                   500                  505                  510

Asp Glu Ile His Thr Val Leu Lys Lys Asp Asn Val Lys Asn Glu Asp  
                   515                  520                  525

Lys Asp Gln Lys Ser Lys Glu Asn Gly Ala Ser Val  
                   530                  535                  540

<210> 5757

<211> 231

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (201)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (214)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (220)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5757

Glu Lys Gln Ala Glu Ile Leu Glu Tyr Ala Tyr His Gly Gln Ile Ala  
       1                  5                  10                  15

## 5048

Ile Val Ala Pro Glu Ala Leu Leu Ala Gly His Asn Tyr Thr Leu Lys  
                   20                                  25                                  30  
 Ile Glu Tyr Ser Ala Asn Ile Ser Ser Ser Tyr Tyr Gly Phe Tyr Gly  
                   35                                  40                                  45  
 Phe Ser Tyr Thr Asp Glu Ser Asn Glu Lys Lys Tyr Phe Ala Ala Thr  
                   50                                  55                                  60  
 Gln Phe Glu Pro Leu Ala Ala Arg Ser Ala Phe Pro Cys Phe Asp Glu  
                   65                                  70                                  75                                  80  
 Pro Ala Phe Lys Ala Thr Phe Ile Ile Lys Ile Ile Arg Asp Glu Gln  
                                   85                                  90                                  95  
 Tyr Thr Ala Leu Ser Asn Met Pro Lys Lys Ser Ser Val Val Leu Asp  
                   100                                  105                                  110  
 Asp Gly Leu Val Gln Asp Glu Phe Ser Glu Ser Val Lys Met Ser Thr  
                   115                                  120                                  125  
 Tyr Leu Val Ala Phe Ile Val Gly Glu Met Lys Asn Leu Ser Gln Asp  
                   130                                  135                                  140  
 Val Asn Gly Thr Leu Val Ser Ile Tyr Ala Val Pro Glu Lys Ile Gly  
                   145                                  150                                  155                                  160  
 Gln Val His Tyr Ala Leu Glu Thr Thr Val Lys Leu Leu Glu Phe Phe  
                                   165                                  170                                  175  
 Gln Asn Tyr Phe Glu Ile Gln Tyr Pro Leu Lys Lys Leu Asp Leu Val  
                   180                                  185                                  190  
 Ala Ile Pro Asp Phe Glu Ala Arg Xaa Asn Gly Lys Leu Gly Phe Cys  
                   195                                  200                                  205  
 Ser Pro Ser Glu Lys Xaa Thr Leu Leu Phe Asp Xaa Tyr Thr Ser Ser  
                   210                                  215                                  220  
 Met Ala Asp Lys Lys Ala Gly  
                   225                                  230

&lt;210&gt; 5758

&lt;211&gt; 294

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5758

Asn Met Thr Glu Asp Ser Gln Arg Asn Phe Arg Ser Val Tyr Tyr Glu

## 5049

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Lys Val Gly Phe Arg Gly Val Glu Glu Lys Lys Ser Leu Glu Ile Leu | 20  | 25  | 30  |
| Leu Lys Asp Asp Arg Leu Asp Thr Glu Lys Leu Cys Thr Phe Ser Gln | 35  | 40  | 45  |
| Arg Phe Pro Leu Pro Ser Met Tyr Arg Ala Leu Val Trp Lys Val Leu | 50  | 55  | 60  |
| Leu Gly Ile Leu Pro Pro His His Glu Ser His Ala Lys Val Met Met | 65  | 70  | 75  |
| Tyr Arg Lys Glu Gln Tyr Leu Asp Val Leu His Ala Leu Lys Val Val | 85  | 90  | 95  |
| Arg Phe Val Ser Asp Ala Thr Pro Gln Ala Glu Val Tyr Leu Arg Met | 100 | 105 | 110 |
| Tyr Gln Leu Glu Ser Gly Lys Leu Pro Arg Ser Pro Ser Phe Pro Leu | 115 | 120 | 125 |
| Glu Pro Asp Asp Glu Val Phe Leu Ala Ile Ala Lys Ala Met Glu Glu | 130 | 135 | 140 |
| Met Val Glu Asp Ser Val Asp Cys Tyr Trp Ile Thr Arg Arg Phe Val | 145 | 150 | 155 |
| Asn Gln Leu Asn Thr Lys Tyr Arg Asp Ser Leu Pro Gln Leu Pro Lys | 165 | 170 | 175 |
| Ala Phe Glu Gln Tyr Leu Asn Leu Glu Asp Gly Arg Leu Leu Thr His | 180 | 185 | 190 |
| Leu Arg Met Cys Ser Ala Ala Pro Lys Leu Pro Tyr Asp Leu Trp Phe | 195 | 200 | 205 |
| Lys Arg Cys Phe Ala Gly Cys Leu Pro Glu Ser Ser Leu Gln Arg Val | 210 | 215 | 220 |
| Trp Asp Lys Val Val Ser Gly Ser Cys Lys Ile Leu Val Phe Val Ala | 225 | 230 | 235 |
| Val Glu Ile Leu Leu Thr Phe Lys Ile Lys Val Met Ala Leu Asn Ser | 245 | 250 | 255 |
| Ala Glu Lys Ile Thr Lys Phe Leu Glu Asn Ile Pro Gln Asp Ser Ser | 260 | 265 | 270 |
| Asp Ala Ile Val Ser Lys Ala Ile Asp Leu Trp His Lys His Cys Gly |     |     |     |

## 5050

275                                      280                                      285  
 Thr Pro Val His Ser Ser  
 290

<210> 5759  
 <211> 431  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (5)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5759  
 Xaa Phe Gly Ala Xaa Gly Thr Val Glu Ser Glu Thr Ser Pro Asp Arg  
 1                                      5                                      10                                      15  
 Asp Lys Lys Lys Glu Gln Ser Glu Val Ser Val Ser Pro Arg Ala Ser  
 20                                      25                                      30  
 Lys His His Tyr Ser Arg Ser Arg Ser Arg Ser Arg Glu Arg Lys Arg  
 35                                      40                                      45  
 Lys Ser Asp Asn Glu Gly Arg Lys His Arg Ser Arg Ser Arg Ser Lys  
 50                                      55                                      60  
 Glu Gly Arg Arg His Glu Ser Lys Asp Lys Ser Ser Lys Lys His Lys  
 65                                      70                                      75                                      80  
 Ser Glu Glu His Asn Asp Lys Glu His Ser Ser Asp Lys Gly Arg Glu  
 85                                      90                                      95  
 Arg Leu Asn Ser Ser Glu Asn Gly Glu Asp Arg His Lys Arg Lys Glu  
 100                                      105                                      110  
 Arg Lys Ser Ser Arg Gly Arg Ser His Ser Arg Ser Arg Ser Arg Glu  
 115                                      120                                      125  
 Arg Arg His Arg Ser Arg Ser Arg Glu Arg Lys Lys Ser Arg Ser Arg  
 130                                      135                                      140  
 Ser Arg Glu Arg Lys Lys Ser Arg Ser Arg Ser Arg Glu Arg Lys Lys

## 5051

|                 |                     |                 |                 |     |  |     |
|-----------------|---------------------|-----------------|-----------------|-----|--|-----|
| 145             |                     | 150             |                 | 155 |  | 160 |
| Ser Arg Ser Arg | Ser Arg Glu Arg Lys | Arg Arg Ile Arg | Ser Arg Ser     |     |  |     |
|                 | 165                 | 170             | 175             |     |  |     |
| Arg Ser Arg Ser | Arg His Arg His     | Arg Thr Arg Ser | Arg Ser Arg Thr |     |  |     |
|                 | 180                 | 185             | 190             |     |  |     |
| Arg Ser Arg Ser | Arg Asp Arg Lys Lys | Arg Ile Glu Lys | Pro Arg Arg     |     |  |     |
|                 | 195                 | 200             | 205             |     |  |     |
| Phe Ser Arg Ser | Leu Ser Arg Thr     | Pro Ser Pro     | Pro Phe Arg Gly |     |  |     |
|                 | 210                 | 215             | 220             |     |  |     |
| Arg Asn Thr Ala | Met Asp Ala Gln Glu | Ala Leu Ala Arg | Arg Arg Leu Glu |     |  |     |
| 225             | 230                 | 235             | 240             |     |  |     |
| Arg Ala Lys Lys | Leu Gln Glu Gln Arg | Glu Lys Glu Met | Val Glu Lys     |     |  |     |
|                 | 245                 | 250             | 255             |     |  |     |
| Gln Lys Gln Gln | Glu Ile Ala Ala Ala | Ala Ala Thr Gly | Gly Gly Ser     |     |  |     |
|                 | 260                 | 265             | 270             |     |  |     |
| Val Leu Asn Val | Ala Ala Leu Leu Ala | Ser Gly Thr Gln | Val Thr Pro     |     |  |     |
|                 | 275                 | 280             | 285             |     |  |     |
| Gln Ile Ala Met | Ala Ala Gln Met Ala | Ala Leu Gln Ala | Lys Ala Leu     |     |  |     |
| 290             | 295                 | 300             |                 |     |  |     |
| Ala Glu Thr Gly | Ile Ala Val Pro Ser | Tyr Tyr Asn Pro | Ala Ala Val     |     |  |     |
| 305             | 310                 | 315             | 320             |     |  |     |
| Asn Pro Met Lys | Phe Ala Glu Gln Glu | Lys Lys Arg Lys | Met Leu Trp     |     |  |     |
|                 | 325                 | 330             | 335             |     |  |     |
| Gln Gly Lys Lys | Glu Gly Asp Lys Ser | Gln Ser Ala Glu | Ile Trp Glu     |     |  |     |
|                 | 340                 | 345             | 350             |     |  |     |
| Lys Leu Asn Phe | Gly Asn Lys Asp Gln | Asn Val Lys Phe | Arg Lys Leu     |     |  |     |
|                 | 355                 | 360             | 365             |     |  |     |
| Met Gly Ile Lys | Ser Glu Asp Glu Ala | Gly Cys Ser Ser | Val Asp Glu     |     |  |     |
|                 | 370                 | 375             | 380             |     |  |     |
| Glu Ser Tyr Lys | Thr Leu Lys Gln Gln | Glu Glu Val Phe | Arg Asn Leu     |     |  |     |
| 385             | 390                 | 395             | 400             |     |  |     |
| Asp Ala Gln Tyr | Glu Met Ala Arg Ser | Gln Thr His Thr | Gln Arg Gly     |     |  |     |
|                 | 405                 | 410             | 415             |     |  |     |
| Met Gly Leu Gly | Phe Thr Ser Ser     | Met Arg Gly Met | Asp Ala Val     |     |  |     |



## 5052

420

425

430

&lt;210&gt; 5760

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5760

Ala Gly Val Phe Ile Gly Glu Arg Lys Cys Val Val Trp Ala Gly Leu  
 1 5 10 15

Leu Val Glu Ala Gly Phe Leu Ala His Leu Leu Tyr Met Leu Pro Met  
 20 25 30

Asp Leu Arg Leu Glu Met Leu Lys Val Glu Trp Asn Tyr Phe Pro Pro  
 35 40 45

Lys Thr Phe Ile Tyr Ser Thr Pro Leu Tyr Pro  
 50 55

&lt;210&gt; 5761

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5761

Val Ile Phe Tyr Phe Thr Asn Lys Gly Thr Lys Ser Met Asn Ile Ser  
 1 5 10 15

Leu Phe Leu Ile Ile Ser Ala Leu Lys Tyr Phe Gly Tyr Leu Ala Pro  
 20 25 30

Val Arg Ala Asp Trp His Cys Leu Val Gln Glu Val Cys Ser Arg Cys  
 35 40 45

Ser Ala Ser Glu Leu His Tyr Asp Cys Pro Pro Thr Asn His Pro Pro  
 50 55 60

Ala Ser Pro Arg Glu Arg Gly Ile Gln Arg Gly Thr Val Leu Thr Arg  
 65 70 75 80

Ser Ser Gln Leu Asp Pro Gly Gln Arg Asn Pro Tyr Pro Gly Thr Leu  
 85 90 95

Ser Leu Ser

## 5053

&lt;210&gt; 5762

&lt;211&gt; 48

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5762

Pro Pro Ser Leu Thr Lys Gly Asn Lys Ser Trp Cys Ser Thr Ala Val  
1 5 10 15

Ala Ala Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala  
20 25 30

Arg Phe Pro Leu Phe Leu Gly Val Ser Ile Leu Ser Pro Trp Lys Met  
35 40 45

&lt;210&gt; 5763

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (85)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (86)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5763

Trp Asn Glu His Arg Pro Leu Asn Pro Arg Tyr Glu Phe Lys Ser Gln  
1 5 10 15

Leu Trp Arg Trp Leu Leu Lys Val Ser Val Pro Ser Phe Phe Xaa Leu  
20 25 30

Tyr Lys Val Asp Ile Thr Ile Ser Asn Leu Gln Ser His Trp Glu Leu  
35 40 45

## 5054

Tyr Met Gln Arg Leu Gly Lys Ala Pro Gly Thr Trp Gln Ala Ile Ser  
 50 55 60  
 Lys Cys Trp Leu Leu Leu Leu Ser Leu Pro Phe Ser Gln Ser Ile  
 65 70 75 80  
 Ile Ile Ser Leu Xaa Xaa Gly Thr Met Ser Tyr Leu Pro Leu Tyr Phe  
 85 90 95  
 Pro Gln Tyr Phe Pro  
 100

&lt;210&gt; 5764

&lt;211&gt; 136

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5764

Cys Val Ile Leu Thr Lys Gly Ser Ser Leu Gly Gln Pro Ser Pro Gly  
 1 5 10 15  
 Leu Gly His Ile His Leu Val Ala Lys Pro Leu Leu Gly Pro Lys Tyr  
 20 25 30  
 Thr Pro Glu Ser Cys Gln Arg Lys Glu Ile Phe Lys Lys His Arg Gln  
 35 40 45  
 Ile Val Cys Lys Trp Lys Ile Pro Ile Gly Leu Asp Ser Cys Gly Gly  
 50 55 60  
 Lys Thr Ser Trp Val Pro Gly Gly Cys Gln Ser Trp Glu Leu Cys Arg  
 65 70 75 80  
 Tyr Glu Ser Gly Lys Ala Gln Arg Gln Ala Glu Ser Leu Tyr Gly Asp  
 85 90 95  
 Asn Leu Gln Cys Leu Leu Gly Phe Pro Asn Asn Leu Gly Val Gln Ser  
 100 105 110  
 Ile Gly Phe Phe Ser Pro Leu Pro Thr Pro Arg Lys Ile Ile Arg Lys  
 115 120 125  
 Met Phe Arg Arg Lys Glu Lys Asn  
 130 135

&lt;210&gt; 5765

## 5055

<211> 168  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (34)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (134)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (160)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (161)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (167)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5765  
 Val Arg Val Gln Glu Val Val Lys Glu Asn Glu Glu Leu His Gln Glu  
           1                  5                  10                  15  
 Leu Asn Lys Ser Ser Ala Val Thr Ser Glu Glu Trp Arg Gln Leu Gln  
                   20                  25                  30  
 Thr Xaa Ala Lys Leu Val Leu Glu Glu Asn Lys Leu Leu Leu Glu Gln  
           35                  40                  45  
 Leu Glu Ile Gln Gln Arg Lys Ala Lys Asp Ser His Gln Glu Arg Leu  
           50                  55                  60  
 Gln Glu Val Ser Lys Leu Thr Lys Gln Leu Met Leu Leu Glu Ala Lys  
           65                  70                  75                  80  
 Thr His Gly Gln Glu Lys Glu Leu Ala Glu Asn Arg Glu Gln Leu Glu  
                   85                  90                  95  
 Ile Leu Arg Ala Lys Cys Gln Glu Leu Lys Thr His Ser Asp Gly Lys  
           100                  105                  110

## 5056

Ile Ala Val Glu Val His Lys Ser Ile Val Asn Glu Leu Lys Ser Gln  
 115 120 125

Leu Gln Lys Glu Glu Xaa Lys Glu Arg Ala Glu Met Glu Glu Leu Met  
 130 135 140

Glu Lys Leu Thr Val Leu Gln Ala Gln Lys Lys Ser Leu Leu Leu Xaa  
 145 150 155 160

Xaa Asn Ile Leu Thr Glu Xaa Asn  
 165

&lt;210&gt; 5766

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5766

Ile Arg His Glu Val Val Gly Gly Ser Gly Gly Val Tyr Ala Leu Cys  
 1 5 10 15

Ser Ala His Leu Ala Asn Val Val Met Asn Trp Ala Gly Met Arg Cys  
 20 25 30

Pro Tyr Lys Leu Leu Arg Met Val Leu Ala Leu Val Cys Met Ser Ser  
 35 40 45

Glu Val Gly Arg Ala Val Trp Leu Arg Phe Ser Pro Pro Leu Pro Ala  
 50 55 60

Ser Gly Pro Gln Pro Ser Phe Met Ala His Leu Ala Gly Ala Val Val  
 65 70 75 80

Gly Val Ser Met Gly Leu Thr Ile Leu Arg Ser Tyr Glu Glu Arg Leu  
 85 90 95

Arg Asp Gln Cys Gly Trp Trp Val Val Leu Leu Ala Tyr Gly Thr Phe  
 100 105 110

Leu Leu Phe Ala Val Phe Trp Asn Val Phe Ala Tyr Asp Leu Leu Gly  
 115 120 125

Ala His Ile Pro Pro Pro Pro  
 130 135

&lt;210&gt; 5767

&lt;211&gt; 351

## 5057

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (35)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5767

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Ile Arg His Glu Ile Leu Trp Leu Leu Cys Ser His Arg Pro Ala Pro
 1              5              10              15

Gly Arg Pro Pro Thr His Asn Ala His Asn Trp Arg Leu Gly Gln Ala
          20              25              30

Pro Ala Xaa Trp Tyr Asn Asp Thr Tyr Pro Leu Ser Pro Pro Gln Arg
          35              40              45

Thr Pro Ala Gly Ile Arg Tyr Arg Ile Ala Val Ile Ala Asp Leu Asp
          50              55              60

Thr Glu Ser Arg Ala Gln Glu Glu Asn Thr Trp Phe Ser Tyr Leu Lys
 65              70              75              80

Lys Gly Tyr Leu Thr Leu Ser Asp Ser Gly Asp Lys Val Ala Val Glu
          85              90              95

Trp Asp Lys Asp His Gly Val Leu Glu Ser His Leu Ala Glu Lys Gly
          100              105              110

Arg Gly Met Glu Leu Ser Asp Leu Ile Val Phe Asn Gly Lys Leu Tyr
          115              120              125

Ser Val Asp Asp Arg Thr Gly Val Val Tyr Gln Ile Glu Gly Ser Lys
          130              135              140

Ala Val Pro Trp Val Ile Leu Ser Asp Gly Asp Gly Thr Val Glu Lys
          145              150              155              160

Gly Phe Lys Ala Glu Trp Leu Ala Val Lys Asp Glu Arg Leu Tyr Val
          165              170              175

Gly Gly Leu Gly Lys Glu Trp Thr Thr Thr Thr Gly Asp Val Val Asn
          180              185              190

Glu Asn Pro Glu Trp Val Lys Val Val Gly Tyr Lys Gly Ser Val Asp
          195              200              205

His Glu Asn Trp Val Ser Asn Tyr Asn Ala Leu Arg Ala Ala Ala Gly
          210              215              220

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## 5058

Ile Gln Pro Pro Gly Tyr Leu Ile His Glu Ser Ala Cys Trp Ser Asp  
 225 230 235 240

Thr Leu Gln Arg Trp Phe Phe Leu Pro Arg Arg Ala Ser Gln Glu Arg  
 245 250 255

Tyr Ser Glu Lys Asp Asp Glu Arg Lys Gly Ala Asn Leu Leu Leu Ser  
 260 265 270

Ala Ser Pro Asp Phe Gly Asp Ile Ala Val Ser His Val Gly Ala Val  
 275 280 285

Val Pro Thr His Gly Phe Ser Ser Phe Lys Phe Ile Pro Asn Thr Asp  
 290 295 300

Asp Gln Ile Ile Val Ala Leu Lys Ser Glu Glu Asp Ser Gly Arg Val  
 305 310 315 320

Ala Ser Tyr Ile Met Ala Phe Thr Leu Asp Gly Arg Phe Leu Leu Pro  
 325 330 335

Glu Thr Lys Ile Gly Ser Val Lys Tyr Glu Gly Ile Glu Phe Ile  
 340 345 350

<210> 5768

<211> 55

<212> PRT

<213> Homo sapiens

<400> 5768

Asn Tyr Gln Ile Ser Glu Ile Tyr Phe Leu Leu Val Thr Met Lys Ser  
 1 5 10 15

Thr Phe Thr Leu Glu Ser Asn Cys Asn Thr Pro Lys Ile Arg Ala Thr  
 20 25 30

Lys Gly Met Tyr Gly Ala Phe Phe Asn Leu Lys Asn Cys Ile Leu Phe  
 35 40 45

Leu Ile Pro Tyr Leu Lys His  
 50 55

<210> 5769

<211> 121

<212> PRT

<213> Homo sapiens

## 5059

&lt;400&gt; 5769

Tyr Pro Phe Phe Thr Leu Cys Gln Arg Asn Arg Val Phe Asp Ile Ser  
 1 5 10 15

Ser Tyr Val Lys Glu Met Leu Gln Asn Val Asn Cys Phe Lys Leu Lys  
 20 25 30

Leu Pro Leu Lys Arg Pro Arg Tyr Ile Tyr Leu Ile Val Tyr Ile Met  
 35 40 45

Phe Asn Ile Cys Gln Ser Ile Leu Gln Val Cys Ser Phe Ile Ser Ile  
 50 55 60

Lys Tyr Gly Tyr Tyr Val Ala Gln Leu Leu Lys Trp Tyr Cys Ile Val  
 65 70 75 80

Tyr Ile Cys Thr Pro Asn Asn Ile Val Cys Thr Phe Cys Phe Leu Tyr  
 85 90 95

Cys Ile Cys Ala Gly Phe Phe Arg Leu Tyr Gln Cys Asn Leu Cys Leu  
 100 105 110

Leu Arg Tyr Val Gln Lys Met Ser Ile  
 115 120

&lt;210&gt; 5770

&lt;211&gt; 191

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (181)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5770

Glu Phe Gly Thr Ser His Trp Asp Met Ser Leu Pro Leu Ile Val Thr  
 1 5 10 15

Leu Ser Thr Ile Ser Ile Ile Leu Leu Ala Ala Met Ile Thr Ile Ala  
 20 25 30

Val Lys Cys Lys Arg Glu Asn Lys Glu Ile Arg Thr Tyr Asn Cys Arg  
 35 40 45

Ile Ala Glu Tyr Ser His Pro Gln Leu Gly Gly Gly Lys Gly Lys Lys  
 50 55 60

Lys Lys Ile Asn Lys Asn Asp Ile Met Leu Val Gln Ser Glu Val Glu



## 5060

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Glu | Arg | Asn | Ala | Met | Asn | Val | Met | Asn | Val | Val | Ser | Ser | Pro | Ser | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Thr | Ser | Pro | Met | Tyr | Phe | Asp | Tyr | Gln | Thr | Arg | Leu | Pro | Leu | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Pro | Arg | Ser | Glu | Val | Met | Tyr | Leu | Lys | Pro | Ala | Ser | Asn | Asn | Leu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Thr | Val | Pro | Gln | Gly | His | Ala | Gly | Cys | His | Thr | Ser | Phe | Thr | Gly | Gln |
|     |     |     | 130 |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gly | Thr | Asn | Ala | Ser | Glu | Thr | Pro | Ala | Thr | Arg | Met | Ser | Ile | Ile | Gln |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Thr | Asp | Asn | Phe | Pro | Ala | Glu | Pro | Asn | Tyr | Met | Gly | Ser | Arg | Gln | Gln |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Phe | Val | Gln | Ser | Xaa | Ser | Thr | Phe | Lys | Asp | Pro | Glu | Arg | Pro | Ala |     |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

&lt;210&gt; 5771

&lt;211&gt; 129

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (95)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5771

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Xaa | Pro | Xaa | Leu | Thr | Lys | Gly | Asn | Lys | Ser | Trp | Ser | Ser | Thr | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Thr | Thr | Ala | Leu | Glu | Leu | Val | Asp | Pro | Pro | Gly | Cys | Arg | Asn | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

## 5061

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|--|
| Ala | Arg | Ala | Pro | Ala | Ser | Arg | Ser | Arg | Thr | Pro | Pro | Ala | Ser | Arg | Leu |    |  |
|     |     | 35  |     |     |     |     |     |     |     | 40  |     |     |     | 45  |     |    |  |
| Thr | Arg | Ser | Cys | Gln | Arg | Arg | Ser | Ala | Ala | Ala | Glu | Pro | Lys | Gly | Pro |    |  |
|     |     | 50  |     |     |     |     |     |     |     | 55  |     |     |     | 60  |     |    |  |
| Glu | Asp | Ser | Gly | Ala | Gly | Gly | Thr | Gly | Cys | Gly | Gly | Ala | Asp | Asp | Pro |    |  |
|     |     | 65  |     |     |     |     |     |     |     | 70  |     |     |     | 75  |     | 80 |  |
| Ala | Lys | Lys | Lys | Lys | Gln | Arg | Arg | Gln | Arg | Thr | His | Phe | Thr | Xaa | Gln |    |  |
|     |     |     |     | 85  |     |     |     |     |     |     |     | 90  |     |     |     | 95 |  |
| Gln | Leu | Gln | Glu | Leu | Glu | Ala | Thr | Phe | Gln | Arg | Asn | Arg | Tyr | Pro | Asp |    |  |
|     |     | 100 |     |     |     |     |     |     |     | 105 |     |     |     | 110 |     |    |  |
| Met | Ser | Met | Arg | Glu | Glu | Ile | Ala | Val | Trp | Thr | Asn | Leu | Thr | Glu | Pro |    |  |
|     |     | 115 |     |     |     |     |     |     |     | 120 |     |     |     | 125 |     |    |  |
| Arg |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |  |

<210> 5772

<211> 399

&lt;212&gt; PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

$\langle 222 \rangle$  (208)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (349)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5772

Leu Glu Pro Pro Ala Glu Pro Leu Gln Tyr Leu Ala Cys Tyr Arg Phe  
1 5 10 15

His Cys Ser His Gln Leu Gly Asp Asn Met Trp Phe Leu Thr Thr Leu  
20 25 30

Leu Leu Trp Val Pro Val Asp Gly Gln Val Asp Thr Thr Lys Ala Val  
35 40 45

Ile Thr Leu Gln Pro Pro Trp Val Ser Val Phe Gln Glu Glu Thr Val  
50 55 60

## 5062

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | His | Cys | Glu | Val | Leu | His | Leu | Pro | Gly | Ser | Ser | Ser | Thr | Gln | 65  | 70  | 75  | 80  |
| Trp | Phe | Leu | Asn | Gly | Thr | Ala | Thr | Gln | Thr | Ser | Thr | Pro | Ser | Tyr | Arg | 85  | 90  | 95  |     |
| Ile | Thr | Ser | Ala | Ser | Val | Asn | Asp | Ser | Gly | Glu | Tyr | Arg | Cys | Gln | Arg | 100 | 105 | 110 |     |
| Gly | Leu | Ser | Gly | Arg | Ser | Asp | Pro | Ile | Gln | Leu | Glu | Ile | His | Arg | Gly | 115 | 120 | 125 |     |
| Trp | Leu | Leu | Leu | Gln | Val | Ser | Ser | Arg | Val | Phe | Thr | Glu | Gly | Glu | Pro | 130 | 135 | 140 |     |
| Leu | Ala | Leu | Arg | Cys | His | Ala | Trp | Lys | Asp | Lys | Leu | Val | Tyr | Asn | Val | 145 | 150 | 155 | 160 |
| Leu | Tyr | Tyr | Arg | Asn | Gly | Lys | Ala | Phe | Lys | Phe | Phe | His | Trp | Asn | Ser | 165 | 170 | 175 |     |
| Asn | Leu | Thr | Ile | Leu | Lys | Thr | Asn | Ile | Ser | His | Asn | Gly | Thr | Tyr | His | 180 | 185 | 190 |     |
| Cys | Ser | Gly | Met | Gly | Lys | His | Arg | Tyr | Thr | Ser | Ala | Gly | Ile | Ser | Xaa | 195 | 200 | 205 |     |
| Thr | Val | Lys | Glu | Leu | Phe | Pro | Ala | Pro | Val | Leu | Asn | Ala | Ser | Val | Thr | 210 | 215 | 220 |     |
| Ser | Pro | Leu | Leu | Glu | Gly | Asn | Leu | Val | Thr | Leu | Ser | Cys | Glu | Thr | Lys | 225 | 230 | 235 | 240 |
| Leu | Leu | Leu | Gln | Arg | Pro | Gly | Leu | Gln | Leu | Tyr | Phe | Ser | Phe | Tyr | Met | 245 | 250 | 255 |     |
| Gly | Ser | Lys | Thr | Leu | Arg | Gly | Arg | Asn | Thr | Ser | Ser | Glu | Tyr | Gln | Ile | 260 | 265 | 270 |     |
| Leu | Thr | Ala | Arg | Arg | Glu | Asp | Ser | Gly | Leu | Tyr | Trp | Cys | Glu | Ala | Ala | 275 | 280 | 285 |     |
| Thr | Glu | Asp | Gly | Asn | Val | Leu | Lys | Arg | Ser | Pro | Glu | Leu | Glu | Leu | Gln | 290 | 295 | 300 |     |
| Val | Leu | Gly | Leu | Gln | Leu | Pro | Thr | Pro | Val | Trp | Phe | His | Val | Leu | Phe | 305 | 310 | 315 | 320 |
| Tyr | Leu | Ala | Val | Gly | Ile | Met | Phe | Leu | Val | Asn | Thr | Val | Leu | Trp | Val | 325 | 330 | 335 |     |

## 5063

Thr Ile Arg Lys Glu Leu Lys Arg Lys Lys Lys Trp Xaa Leu Glu Ile  
                   340                  345                  350

Ser Leu Asp Ser Gly His Glu Lys Lys Val Ile Ser Ser Leu Gln Glu  
                   355                  360                  365

Asp Arg His Leu Glu Glu Glu Leu Lys Cys Gln Glu Gln Lys Glu Glu  
                   370                  375                  380

Gln Leu Gln Glu Gly Val His Arg Lys Glu Pro Gln Gly Ala Thr  
                   385                  390                  395

<210> 5773

<211> 164

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (20)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (154)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5773

Gly Asp Arg Ala Glu Pro Ser Val Tyr Trp Ala Ala Val Thr Leu Arg  
                   1                  5                  10                  15

Phe Gln Met Xaa Met Phe Glu Ser Ala Asp Ser Thr Ala Thr Arg Ser  
                   20                  25                  30

Gly Gln Asp Leu Trp Ala Glu Ile Cys Ser Cys Leu Pro Asn Pro Glu  
                   35                  40                  45

Gln Glu Asp Gly Ala Asn Asn Ala Phe Ser Asp Ser Phe Val Asp Ser  
                   50                  55                  60

Cys Pro Glu Gly Glu Gly Gln Arg Glu Val Ala Asp Phe Ala Val Gln  
                   65                  70                  75                  80

Pro Ala Val Lys Pro Trp Ala Pro Leu Gln Asp Ser Glu Val Tyr Leu  
                   85                  90                  95

Ala Ser Leu Glu Lys Lys Leu Arg Arg Ile Lys Gly Leu Asn Gln Glu  
                   100                  105                  110

## 5064

Val Thr Ser Lys Asp Met Leu Arg Thr Leu Ala Gln Ala Lys Lys Glu  
 115 120 125

Cys Trp Asp Arg Phe Leu Gln Glu Lys Leu Ala Ser Glu Phe Phe Val  
 130 135 140

Asp Gly Leu Asp Ser Asp Glu Ser Thr Xaa Gly Thr Phe Gln Glu Val  
 145 150 155 160

Ala Pro Ala Arg

<210> 5774  
 <211> 184  
 <212> PRT  
 <213> Homo sapiens

<400> 5774  
 Lys Met Ala Ser Asn Lys Thr Thr Leu Gln Lys Met Gly Lys Lys Gln  
 1 5 10 15

Asn Gly Lys Ser Lys Lys Val Glu Glu Ala Glu Pro Glu Glu Phe Val  
 20 25 30

Val Glu Lys Val Leu Asp Arg Arg Val Val Asn Gly Lys Val Glu Tyr  
 35 40 45

Phe Leu Lys Trp Lys Gly Phe Thr Asp Ala Asp Asn Thr Trp Glu Pro  
 50 55 60

Glu Glu Asn Leu Asp Cys Pro Glu Leu Ile Glu Ala Phe Leu Asn Ser  
 65 70 75 80

Gln Lys Ala Gly Lys Glu Lys Asp Gly Thr Lys Arg Lys Ser Leu Ser  
 85 90 95

Asp Ser Glu Ser Asp Asp Ser Lys Ser Lys Lys Lys Arg Asp Ala Ala  
 100 105 110

Asp Lys Pro Arg Gly Phe Ala Arg Gly Leu Asp Pro Glu Arg Ile Ile  
 115 120 125

Gly Ala Thr Asp Ser Ser Gly Glu Leu Met Phe Leu Met Lys Trp Lys  
 130 135 140

Asp Ser Asp Glu Ala Asp Leu Val Leu Ala Lys Glu Ala Asn Met Lys  
 145 150 155 160

## 5065

Cys Pro Gln Ile Val Ile Ala Phe Tyr Glu Glu Arg Leu Thr Trp His  
                             165                            170                            175

Ser Cys Pro Glu Asp Glu Ala Gln  
                             180

<210> 5775

<211> 76

<212> PRT

<213> Homo sapiens

<400> 5775

Lys Val Thr Glu Asp Thr Ser Ser Val Leu Arg Ser Pro Met Pro Gly  
       1                            5                            10                            15

Val Val Val Ala Val Ser Val Lys Pro Gly Asp Ala Val Ala Glu Gly  
                             20                            25                            30

Gln Glu Ile Cys Val Ile Glu Ala Met Lys Met Gln Asn Ser Met Thr  
                             35                            40                            45

Ala Gly Lys Thr Gly Thr Val Lys Ser Val His Cys Gln Ala Gly Asp  
                             50                            55                            60

Thr Val Gly Glu Gly Asp Leu Leu Val Glu Leu Glu  
       65                            70                            75

<210> 5776

<211> 57

<212> PRT

<213> Homo sapiens

<400> 5776

Thr Leu Gln Ser Lys Asp Ile Asp Trp Leu Asn Glu Trp Arg Lys Gln  
       1                            5                            10                            15

Asp Pro Leu Ile Cys Cys Leu Gln Glu Thr His Leu Asn Tyr Lys Asp  
                             20                            25                            30

Thr His Arg Leu Lys Val Lys Ser Trp Lys Glu Leu Phe His Ala Asn  
                             35                            40                            45

Gly Asn Gln Glu Lys Glu Lys Glu Tyr  
       50                            55

## 5066

&lt;210&gt; 5777

&lt;211&gt; 277

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (91)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (125)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5777

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gln | Lys | Gly | Thr | Ala | Ala | Arg | Arg | Arg | Gln | Xaa | Gly | Leu | Leu | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Arg | Pro | Glu | Pro | Ala | Asn | Glu | Arg | Lys | Met | Ala | Asp | Asn | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | His | Asp | Ala | Leu | Ser | Gly | Ser | Gly | Asn | Pro | Asn | Pro | Gln | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Pro | Gly | Ala | Trp | Gly | Asn | Gln | Pro | Ala | Gly | Ala | Gly | Gly | Tyr | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Ser | Tyr | Pro | Gly | Ala | Tyr | Pro | Gly | Gln | Ala | Pro | Pro | Gly | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Pro | Gly | Gln | Ala | Pro | Pro | Gly | Ala | Tyr | Xaa | Gly | Ala | Pro | Gly | Ala |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Pro | Gly | Ala | Pro | Ala | Pro | Gly | Val | Tyr | Pro | Gly | Pro | Pro | Ser | Gly |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gly | Ala | Tyr | Pro | Ser | Ser | Gly | Gln | Pro | Ser | Ala | Xaa | Gly | Ala | Tyr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Thr | Gly | Pro | Tyr | Gly | Ala | Pro | Ala | Gly | Pro | Leu | Ile | Val | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Asn | Leu | Pro | Leu | Pro | Gly | Gly | Val | Val | Pro | Arg | Met | Leu | Ile | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

## 5067

Ile Leu Gly Thr Val Lys Pro Asn Ala Asn Arg Ile Ala Leu Asp Phe  
                           165                          170                          175

Gln Arg Gly Asn Asp Val Ala Phe His Phe Asn Pro Arg Phe Asn Glu  
                           180                          185                          190

Asn Asn Arg Arg Val Ile Val Cys Asn Thr Lys Leu Asp Asn Asn Trp  
                           195                          200                          205

Gly Arg Glu Glu Arg Gln Ser Val Phe Pro Phe Glu Ser Gly Lys Pro  
                           210                          215                          220

Phe Lys Ile Gln Val Leu Val Glu Pro Asp His Phe Lys Val Ala Val  
                           225                          230                          235                          240

Asn Asp Ala His Leu Leu Gln Tyr Asn His Arg Val Lys Lys Leu Asn  
                           245                          250                          255

Glu Ile Ser Lys Leu Gly Ile Ser Gly Asp Ile Asp Leu Thr Ser Ala  
                           260                          265                          270

Ser Tyr Thr Met Ile  
                           275

<210> 5778

<211> 565

<212> PRT

<213> Homo sapiens

<400> 5778

Leu His Cys Thr Met Cys Gly Ile Trp Ala Leu Phe Gly Ser Asp Asp  
   1                          5                          10                          15

Cys Leu Ser Val Gln Cys Leu Ser Ala Met Lys Ile Ala His Arg Gly  
                           20                          25                          30

Pro Asp Ala Phe Arg Phe Glu Asn Val Asn Gly Tyr Thr Asn Cys Cys  
                           35                          40                          45

Phe Gly Phe His Arg Leu Ala Val Val Asp Pro Leu Phe Gly Met Gln  
                           50                          55                          60

Pro Ile Arg Val Lys Lys Tyr Pro Tyr Leu Trp Leu Cys Tyr Asn Gly  
                           65                          70                          75                          80

Glu Ile Tyr Asn His Lys Lys Met Gln Gln His Phe Glu Phe Glu Tyr  
                           85                          90                          95

Gln Thr Lys Val Asp Gly Glu Ile Ile Leu His Leu Tyr Asp Lys Gly



## 5068

|   |     |     |
|---|-----|-----|
| 100   | 105 | 110 |
| Gly Ile Glu Gln Thr Ile Cys Met Leu Asp Gly Val Phe Ala Phe Val |     |     |
| 115   | 120 | 125 |
| Leu Leu Asp Thr Ala Asn Lys Lys Val Phe Leu Gly Arg Asp Thr Tyr |     |     |
| 130   | 135 | 140 |
| Gly Val Arg Pro Leu Phe Lys Ala Met Thr Glu Asp Gly Phe Leu Ala |     |     |
| 145   | 150 | 155 |
| Val Cys Ser Glu Ala Lys Gly Leu Val Thr Leu Lys His Ser Ala Thr |     |     |
| 165   | 170 | 175 |
| Pro Phe Leu Lys Val Glu Pro Phe Leu Pro Gly His Tyr Glu Val Leu |     |     |
| 180   | 185 | 190 |
| Asp Leu Lys Pro Asn Gly Lys Val Ala Ser Val Glu Met Val Lys Tyr |     |     |
| 195   | 200 | 205 |
| His His Cys Arg Asp Glu Pro Leu His Ala Leu Tyr Asp Asn Val Glu |     |     |
| 210   | 215 | 220 |
| Lys Leu Phe Pro Gly Phe Glu Ile Glu Thr Val Lys Asn Asn Leu Arg |     |     |
| 225   | 230 | 235 |
| Ile Leu Phe Asn Asn Ala Val Lys Lys Arg Leu Met Thr Asp Arg Arg |     |     |
| 245   | 250 | 255 |
| Ile Gly Cys Leu Leu Ser Gly Gly Leu Asp Ser Ser Leu Val Ala Ala |     |     |
| 260   | 265 | 270 |
| Thr Leu Leu Lys Gln Leu Lys Glu Ala Gln Val Gln Tyr Pro Leu Gln |     |     |
| 275   | 280 | 285 |
| Thr Phe Ala Ile Gly Met Glu Asp Ser Pro Asp Leu Leu Ala Ala Arg |     |     |
| 290   | 295 | 300 |
| Lys Val Ala Asp His Ile Gly Ser Glu His Tyr Glu Val Leu Phe Asn |     |     |
| 305   | 310 | 315 |
| Ser Glu Glu Gly Ile Gln Ala Leu Asp Glu Val Ile Phe Ser Leu Glu |     |     |
| 325   | 330 | 335 |
| Thr Tyr Asp Ile Thr Thr Val Arg Ala Ser Val Gly Met Tyr Leu Ile |     |     |
| 340   | 345 | 350 |
| Ser Lys Tyr Ile Arg Lys Asn Thr Asp Ser Val Val Ile Phe Ser Gly |     |     |
| 355   | 360 | 365 |
| Glu Gly Ser Asp Glu Leu Thr Gln Gly Tyr Ile Tyr Phe His Lys Ala |     |     |

## 5069

| 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Pro | Glu | Lys | Ala | Glu | Glu | Glu | Ser | Glu | Arg | Leu | Leu | Arg | Glu |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Leu | Tyr | Leu | Phe | Asp | Val | Leu | Arg | Ala | Asp | Arg | Thr | Thr | Ala | Ala | His |
|     |     |     |     | 405 |     |     |     |     | 410 |     |     |     |     | 415 |     |
| Gly | Leu | Glu | Leu | Arg | Val | Pro | Phe | Leu | Asp | His | Arg | Phe | Ser | Ser | Tyr |
|     |     |     | 420 |     |     |     |     | 425 |     |     |     |     | 430 |     |     |
| Tyr | Leu | Ser | Leu | Pro | Pro | Glu | Met | Arg | Ile | Pro | Lys | Asn | Gly | Ile | Glu |
|     |     | 435 |     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |
| Lys | His | Leu | Leu | Arg | Glu | Thr | Phe | Glu | Asp | Ser | Asn | Leu | Ile | Pro | Lys |
|     | 450 |     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     |
| Glu | Ile | Leu | Trp | Arg | Pro | Lys | Glu | Ala | Phe | Ser | Asp | Gly | Ile | Thr | Ser |
| 465 |     |     |     |     | 470 |     |     |     |     | 475 |     |     |     |     | 480 |
| Val | Lys | Asn | Ser | Trp | Phe | Lys | Ile | Leu | Gln | Glu | Tyr | Val | Glu | His | Gln |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |     |
| Val | Asp | Asp | Ala | Met | Met | Ala | Asn | Ala | Ala | Gln | Lys | Phe | Pro | Phe | Asn |
|     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |     |     |
| Thr | Pro | Lys | Thr | Lys | Glu | Gly | Tyr | Tyr | Tyr | Arg | Gln | Val | Phe | Glu | Arg |
|     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |     |     |     |
| His | Tyr | Pro | Gly | Arg | Ala | Asp | Trp | Leu | Ser | His | Tyr | Trp | Met | Pro | Lys |
|     | 530 |     |     |     |     | 535 |     |     |     |     | 540 |     |     |     |     |
| Trp | Ile | Asn | Ala | Thr | Asp | Pro | Ser | Ala | Arg | Thr | Leu | Thr | His | Tyr | Lys |
| 545 |     |     |     |     | 550 |     |     |     |     | 555 |     |     |     |     | 560 |
| Ser | Ala | Val | Lys | Ala |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 565 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 5779

&lt;211&gt; 173

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (110)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5779

## 5070

Cys Phe Ala Ser Asp Arg Ile Ser Leu His Arg Asp Leu Gly Pro Asp  
 1 5 10 15  
 Thr Arg Pro Pro Glu Cys Ile Glu Gln Lys Phe Lys Arg Cys Pro Pro  
 20 25 30  
 Leu Pro Thr Thr Ser Val Ile Ile Val Phe His Asn Glu Ala Trp Ser  
 35 40 45  
 Thr Leu Leu Arg Thr Val His Ser Val Leu Tyr Ser Ser Pro Ala Ile  
 50 55 60  
 Leu Leu Lys Glu Ile Ile Leu Val Asp Asp Ala Ser Val Asp Glu Tyr  
 65 70 75 80  
 Leu His Asp Lys Leu Asp Glu Tyr Val Lys Gln Phe Ser Ile Val Lys  
 85 90 95  
 Ile Val Arg Gln Arg Glu Arg Lys Gly Leu Ile Thr Ala Xaa Leu Leu  
 100 105 110  
 Gly Ala Thr Val Ala Thr Ala Glu Thr Leu Thr Phe Leu Asp Ala His  
 115 120 125  
 Cys Glu Cys Phe Tyr Gly Trp Leu Glu Pro Leu Leu Ala Arg Ile Ala  
 130 135 140  
 Glu Asn Tyr Thr Ala Val Val Ser Pro Asp Ile Ala Ser Ile Asp Leu  
 145 150 155 160  
 Asn Thr Phe Glu Phe Asn Lys Pro Ser Pro Tyr Gly Lys  
 165 170

&lt;210&gt; 5780

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5780

Glu Lys Leu Thr Asp Leu Asn Lys Trp Gly Ser Thr Pro Cys Ser Thr  
 1 5 10 15  
 Ile Gly Lys Leu Arg Ile Val Lys Met Ser Phe Leu Pro Lys Leu Ile  
 20 25 30  
 Tyr Lys Ser Gln Lys Thr Phe Phe Leu Gln Thr Leu Ile Lys Val Val  
 35 40 45  
 Phe

5071

<210> 5781  
<211> 63  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (25)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (32)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (33)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (36)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (38)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (41)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (42)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (43)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE

## 5072

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (51)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5781

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Cys | Lys | Lys | Asp | Met | Lys | Asn | Met | Asn | Tyr | Cys | Thr | Ser | His | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Phe | His | Val | Gln | Tyr | Ser | Arg | Xaa | Ile | Leu | Thr | Thr | Ile | Asp | Xaa |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Leu | Lys | Xaa | Val | Xaa | Gly | Lys | Xaa | Xaa | Xaa | Ile | Leu | Xaa | Ile | Xaa |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ile | Ala | Xaa | Glu | Arg | Arg | Ile | Gln | Gly | Pro | Glu | Xaa | Gly | Ala | Thr |  |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |  |

&lt;210&gt; 5782

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (75)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5782

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Arg | Val | Ile | Leu | His | Ser | Pro | Leu | Met | Ser | Gly | Leu | Arg | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Phe | Pro | Asp | Thr | Arg | Lys | Thr | Tyr | Cys | Phe | Asp | Ala | Phe | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Asp | Lys | Ile | Ser | Lys | Val | Thr | Ser | Pro | Val | Leu | Val | Ile | His | Gly |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5073

35                                      40                                      45  
 Thr Glu Asp Glu Val Ile Asp Phe Ser His Gly Leu Ala Met Tyr Glu  
      50                                      55                                      60  
 Arg Cys Pro Arg Ala Val Glu Pro Leu Trp Xaa Glu Gly Ala Gly His  
      65                                      70                                      75                                      80  
 Asn Asp Ile Glu Leu Tyr Ala Gln Tyr Leu Glu Arg Leu Lys Gln Phe  
                                     85                                      90                                      95  
 Ile Ser His Glu Leu Pro Asn Ser  
                                     100

&lt;210&gt; 5783

&lt;211&gt; 219

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (43)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5783

Ser Phe Arg Leu Xaa Cys Glu Leu Arg Arg Cys Met Xaa Gly Asn Asn  
      1                                      5                                      10                                      15

Met Ser Thr Pro Leu Pro Ala Ile Val Pro Ala Ala Arg Lys Ala Thr  
                                     20                                      25                                      30

Ala Ala Val Ile Phe Leu His Gly Leu Gly Xaa Thr Gly Pro Val Arg  
                                     35                                      40                                      45

Pro Val Thr Leu Asn Met Asn Val Ala Met Pro Ser Trp Phe Asp Ile  
                                     50                                      55                                      60

Ile Gly Leu Ser Pro Asp Ser Gln Glu Asp Glu Ser Gly Ile Lys Gln  
      65                                      70                                      75                                      80

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ala | Ala | Glu | Asn | Ile | Lys | Ala | Leu | Ile | Asp | Gln | Glu | Val | Lys | Asn | Gly |  |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     | 95  |     |     |     |  |
| Ile | Pro | Ser | Asn | Arg | Ile | Ile | Leu | Gly | Gly | Phe | Ser | Gln | Gly | Gly | Ala |  |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     | 110 |     |     |     |  |
| Leu | Ser | Leu | Tyr | Thr | Ala | Leu | Thr | Thr | Gln | Gln | Lys | Leu | Ala | Gly | Val |  |
|     |     |     | 115 |     |     |     |     |     | 120 |     |     | 125 |     |     |     |  |
| Thr | Ala | Leu | Ser | Cys | Trp | Leu | Pro | Leu | Arg | Ala | Ser | Phe | Pro | Gln | Gly |  |
|     |     |     | 130 |     |     |     |     |     | 135 |     |     | 140 |     |     |     |  |
| Pro | Ile | Gly | Gly | Ala | Asn | Arg | Asp | Ile | Ser | Ile | Leu | Gln | Cys | His | Gly |  |
| 145 |     |     |     |     |     | 150 |     |     |     |     |     | 155 |     |     | 160 |  |
| Asp | Cys | Asp | Pro | Leu | Val | Pro | Leu | Met | Phe | Gly | Ser | Leu | Thr | Val | Glu |  |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |     | 175 |  |
| Lys | Leu | Lys | Thr | Leu | Val | Asn | Pro | Ala | Asn | Val | Thr | Phe | Lys | Thr | Tyr |  |
|     |     |     | 180 |     |     |     |     |     | 185 |     |     |     |     |     | 190 |  |
| Glu | Gly | Met | Met | His | Ser | Ser | Cys | Gln | Gln | Glu | Met | Met | Asp | Val | Lys |  |
|     |     |     | 195 |     |     |     |     |     | 200 |     |     |     |     |     | 205 |  |
| Gln | Phe | Ile | Asp | Lys | Leu | Leu | Pro | Pro | Ile | Asp |     |     |     |     |     |  |
| 210 |     |     |     |     |     | 215 |     |     |     |     |     |     |     |     |     |  |

<213> Homo sapiens

<223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

Pro Arg His Gly Gln His His Arg Glu Gln Gly Asp Thr Ala Ile Leu  
1 5 10 15

Arg Cys Val Val Glu Asp Lys Asn Ser Lys Val Ala Trp Leu Asn Arg  
20 25 30

## 5075

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Ser | Gly | Ile | Ile | Phe | Ala | Gly | His | Asp | Lys | Trp | Ser | Leu | Asp | Pro | Arg |  |  |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |  |  |
| Val | Glu | Leu | Glu | Lys | Arg | His | Ser | Leu | Glu | Tyr | Ser | Leu | Arg | Ile | Gln |  |  |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |  |  |
| Lys | Val | Asp | Val | Tyr | Asp | Glu | Gly | Ser | Tyr | Thr | Cys | Ser | Val | Gln | Thr |  |  |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |  |  |
| Gln | His | Glu | Pro | Lys | Thr | Ser | Gln | Val | Tyr | Leu | Ile | Val | Gln | Val | Pro |  |  |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |  |  |
| Pro | Lys | Ile | Ser | Asn | Ile | Ser | Ser | Asp | Val | Thr | Val | Asn | Glu | Gly | Ser |  |  |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |  |  |
| Asn | Val | Thr | Leu | Val | Cys | Met | Ala | Asn | Gly | Xaa | Pro | Glu | Pro | Val | Ile |  |  |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |  |  |
| Thr | Trp | Arg | His | Leu | Thr | Pro | Xaa | Gly | Arg | Glu | Phe | Glu | Gly | Glu | Glu |  |  |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |  |  |
| Glu | Tyr | Leu | Glu | Ile | Leu | Gly | Ile | Thr | Arg | Glu | Gln | Ser | Gly | Lys | Tyr |  |  |
|     | 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |  |  |
| Glu | Cys | Lys | Ala | Ala | Asn | Glu | Val | Ser | Ser | Ala | Asp | Val | Lys | Gln | Val |  |  |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |  |  |
| Lys | Val | Thr | Val | Asn | Tyr | Pro | Pro | Thr | Ile | Thr | Glu | Ser | Lys | Ser | Asn |  |  |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |  |  |
| Glu | Ala | Thr | Thr | Gly | Arg | Gln | Ala | Ser | Leu | Lys | Cys | Glu | Ala | Ser | Ala |  |  |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |  |  |
| Val | Pro | Ala | Pro | Asp | Phe | Glu | Trp | Tyr | Arg | Asp | Asp | Thr | Arg | Ile | Asn |  |  |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |  |  |
| Ser | Ala | Asn | Gly | Leu | Glu | Ile | Lys | Ser | Thr | Glu | Gly | Gln | Ser | Ser | Leu |  |  |
|     | 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |  |  |
| Thr | Val | Thr | Asn | Val | Thr | Glu | Glu | His | Tyr | Gly | Asn | Tyr | Thr | Cys | Val |  |  |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |  |  |
| Ala | Ala | Asn | Lys | Leu | Gly | Val | Thr | Asn | Ala | Ser | Leu | Val | Leu | Phe | Lys |  |  |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |  |  |
| Arg | Val | Leu | Pro | Thr | Ile | Pro | His | Pro | Ile | Gln | Glu | Ile | Gly | Thr | Thr |  |  |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |  |  |
| Val | His | Phe | Lys | Gln | Lys | Gly | Pro | Gly | Ser | Val | Arg | Gly | Ile | Asn | Gly |  |  |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |  |  |



## 5076

Ser Ile Ser Leu Ala Val Pro Leu Trp Leu Leu Ala Ala Ser Leu Leu  
 305 310 315 320

Cys Leu Leu Ser Lys Cys  
 325

<210> 5785

<211> 217

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (76)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (191)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (208)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (213)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5785

Pro Thr Arg Pro Ala Glu Lys Asp Pro Gly Arg Ser Ala Pro Gly Ala  
 1 5 10 15

Ala Ser Ala Ala Ala Ala Leu Lys Gln Leu Gly Asp Ser Pro Ala Glu  
 20 25 30

Asp Lys Ser Ser Phe Lys Pro Tyr Ser Lys Gly Ser Gly Gly Gly Asp  
 35 40 45

Ser Arg Lys Asp Ser Gly Ser Ser Ser Val Ser Ser Thr Ser Ser Ser  
 50 55 60

Ser Ser Ser Ser Pro Gly Asp Lys Ala Gly Phe Xaa Val Pro Ser Ala  
 65 70 75 80

Ala Cys Pro Pro Phe Pro Pro His Gly Ala Pro Val Ser Ala Ser Ser

## 5077

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 85  |  | 90  |  | 95  |
| Ser Ser Ser Ser Pro Gly Gly Ser Arg Gly Gly Ser Pro His His Ser | 100 |  | 105 |  | 110 |
| Asp Cys Lys Asn Gly Gly Gly Val Gly Gly Gly Glu Leu Asp Lys Lys | 115 |  | 120 |  | 125 |
| Asp Gln Glu Pro Lys Pro Ser Pro Glu Pro Ala Ala Val Ser Arg Gly | 130 |  | 135 |  | 140 |
| Gly Gly Gly Glu Pro Gly Ala His Gly Gly Ala Glu Ser Gly Ala Ser | 145 |  | 150 |  | 155 |
| Gly Arg Lys Ser Glu Pro Pro Ser Ala Leu Val Gly Ala Gly His Val | 165 |  | 170 |  | 175 |
| Ala Pro Val Ser Pro Thr Ser Arg Ala Thr Arg Cys Ser Arg Xaa Arg | 180 |  | 185 |  | 190 |
| Leu Gln His Trp Leu Pro Arg Leu His Arg Gly Arg Leu Arg Arg Xaa | 195 |  | 200 |  | 205 |
| Pro Val Leu Ile Xaa Ala Trp Pro Gly                             | 210 |  | 215 |  |     |

&lt;210&gt; 5786

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5786

|   |    |    |    |    |
|---|----|----|----|----|
| Pro Gln Lys Lys Tyr Phe Met Trp Val Phe Cys Phe Ser Leu Leu Asp | 1  | 5  | 10 | 15 |
| Phe Met Asp Glu Gly Ile Trp Leu Thr Phe Tyr Phe Leu Met Glu Gln | 20 | 25 | 30 |    |
| Pro Val Phe Val Asn Tyr Ser Leu Val Asn Cys Glu Ile Leu Asn Ser | 35 | 40 | 45 |    |
| Leu Pro Ala Ile Leu Val Leu Val Ser Gly Gln Ile Tyr Ala Val Val | 50 | 55 | 60 |    |
| Leu Met Arg Leu Val   | 65 |    |    |    |

## 5078

&lt;210&gt; 5787

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5787

His Cys Ser Glu Gly His Ala Lys Ser Arg His Arg Ser Trp Gln Gln  
 1 5 10 15

Glu Gly Asp Arg Ala Ser Pro Arg His Thr Ser Pro Gly Gly Asp Ser  
 20 25 30

Gly Lys Glu Pro Arg Thr Gly Lys Asp Trp Val Gly Glu Gly Val Arg  
 35 40 45

Gly Leu Val Val Thr Gln Ser Trp Arg Gly Ala Lys Ser Thr Gly Gly  
 50 55 60

Tyr Pro Leu Ala Ala Ser Ala Leu Ala Val Cys Pro Phe Met Ser Gln  
 65 70 75 80

Thr Ala Thr Thr Met Tyr Leu Gln Trp Gly Cys Arg Asp Gly Gly Asp  
 85 90 95

Ser Ser Leu Thr Pro Gln Glu Leu Pro Gly Pro Lys Glu Glu Asn Ala  
 100 105 110

Ala Ser Phe Gln Ser Gly Leu His Pro Leu Ser Gly Ser Leu Ser Ala  
 115 120 125

Ser Cys Asn Ser Gly Cys Phe Ser Arg Leu Ser Ser Asn Ser Ala Pro  
 130 135 140

Pro

145

&lt;210&gt; 5788

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5788

Leu Arg Arg Pro Phe Leu Met Leu Leu Leu Asp Leu Met Ser Ser Pro  
 1 5 10 15

Ser Pro Gln Leu Leu Val Ala Ala Ala Gln Gln Thr Leu Gly Met Gly  
 20 25 30

Lys Arg Arg Ser Pro Pro Gln Ala Ile Cys Leu His Leu Ala Gly Glu

## 5079

35                      40                      45  
 Val Leu Ala Val Ala Arg Gly Leu Lys Pro Ala Val Leu Tyr Asp Cys  
     50                      55                      60  
 Asn Cys Ala Gly Ala Ser Glu Leu Gln Ser Tyr Leu Glu Glu Leu Lys  
     65                      70                      75                      80  
 Gly Leu Gly Phe Leu Thr Phe Gly Leu His Ile Leu Glu Ile Gly Glu  
                     85                      90                      95  
 Asn Ser Leu Ile Val Ser Pro Glu His Val Cys Gln His Leu Glu Gln  
                     100                      105                      110  
 Val

&lt;210&gt; 5789

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5789

Lys Phe Ser Gln Ala Trp Trp His Met Pro Ile Val Pro Ala Ile Trp  
     1                      5                      10                      15  
 Val Ala Lys Val Gly Glu Leu Leu Glu Pro Gly Arg Ser Arg Leu Gln  
                     20                      25                      30

&lt;210&gt; 5790

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5790

Val Tyr Lys Met Phe Ser Met Arg Asn Gln Glu Thr Tyr Thr Gly Leu  
     1                      5                      10                      15  
 Thr Val Val Ser Tyr Met Ser Pro Gln Phe Gln Cys Ala Cys Ser Leu  
                     20                      25                      30  
 Thr Ser Pro Phe Pro Asn Pro Ser Leu Leu Gly Cys Cys Phe Lys Val  
                     35                      40                      45

## 5080

Cys Pro Ser Pro Asn Leu Asp Phe Tyr Tyr Arg Ser Lys Ala Leu Ser  
 50 55 60

Ile Leu Tyr  
 65

<210> 5791

<211> 77

<212> PRT

<213> Homo sapiens

<400> 5791

Trp Leu Leu Cys Pro Val Arg Val Phe Ser Ser Leu Thr Trp Val His  
 1 5 10 15

Phe Leu Met Ala His Met Lys Phe Gly Ser Tyr Gly Leu Thr Leu Ala  
 20 25 30

Met Val Leu Ser Tyr Gly Glu Gln His Gln Arg Pro Val Thr Cys Lys  
 35 40 45

Leu Lys Ile Gln Cys Gln Gly Pro Ser Pro Ala Pro Leu Ile Glu Asn  
 50 55 60

Leu Leu Ala Ile Cys Ile Phe Arg Cys Ser Arg Leu Val  
 65 70 75

<210> 5792

<211> 120

<212> PRT

<213> Homo sapiens

<400> 5792

Tyr Val Tyr Leu Ile Ile Leu Pro Leu Ala Lys Cys Tyr Val Cys Lys  
 1 5 10 15

Met Trp His Leu Leu Val Phe Ile Val Cys Val Phe Phe Val Tyr Tyr  
 20 25 30

Thr Leu Gly Asn Phe Val Leu Pro Lys Lys Lys Lys Lys Arg Lys Cys  
 35 40 45

Asn Val Arg His Thr Arg Lys Ala Asn Gln Cys Cys Lys Leu Lys Val  
 50 55 60

Gln Phe Gln Arg Ser Leu Pro Thr Ala Gly Phe Phe Leu Tyr Phe Lys  
 65 70 75 80

## 5081

Asn Ile Met Leu His Ile Ile Ala Ile Phe Ile Phe Trp Gly Phe Ala  
                             85                            90                            95

Thr Leu Ile Gln Trp Asn Gln Trp Lys Cys His Pro Ala Thr Glu Leu  
                             100                            105                            110

Pro Leu Leu Tyr Leu Lys Ser Phe  
                             115                            120

<210> 5793

<211> 104

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (42)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (66)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (74)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (82)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5793

Leu Leu Gly Ser Cys Leu Gln Glu Ala Met Thr Leu Asn Ser Glu Pro  
     1                            5                            10                            15

Tyr Ser Val Leu Thr Ser Gly Ser His Val Phe Leu Cys Gln Val Ile  
                             20                            25                            30

Lys Tyr Leu Val Leu Val Phe Cys Leu Xaa Pro Lys Leu Pro Leu Trp  
                             35                            40                            45

Val His Arg Arg Leu Gly Ser Ile Val Arg Met Ala Ile Arg Glu Tyr  
                             50                            55                            60

Lys Xaa Gly Phe Ser Arg Ala Trp Glu Xaa Ile Leu Glu Pro Arg Arg

[illegible]

```
<400> 5794
Asp Leu Lys Arg Lys Ser Lys Ser Phe Tyr Tyr Asp Xaa Ile Pro Val
 1             5             10             15
Glu Tyr Leu Lys Gly Thr Pro His Leu Asn Asn Gln Cys Lys Tyr Phe
      20             25             30
Leu Ser Lys Leu
      35
```

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<210> 5795
<211> 96
<212> PRT
<213> Homo sapiens

<400> 5795
Ile Ala Arg Leu Val Gly Phe Ala Thr Cys Gly Ser Pro Arg Gly Ser
  1             5             10             15
Lys Asn Gly Gly Arg Arg Gly Gly Gly Gly Pro Gly Arg Glu Trp Val
      20             25             30
Glu Leu Glu Pro Gln Lys Ser Ala Glu Leu Arg Gly Arg Ala Gly Arg
      35             40             45
Lys Gly Gly Gly Ala Ala Gly Ala Arg Gly His Pro Ala Ala Gly Cys
      50             55             60
Ser Asp Arg Gly Lys Cys Leu Glu Asn Cys Gly Leu Arg Cys Leu Tyr

```

## 5083

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Asp | Ala | Val | Leu | Leu | Glu | Pro | Trp | Arg | Lys | Met | Glu | Leu | Val | Leu | Gln |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

&lt;210&gt; 5796

&lt;211&gt; 220

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (30)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (33)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (36)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (37)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5796

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gly | Gly | Ala | Tyr | Asp | Gly | Lys | Tyr | Glu | Lys | Thr | Leu | Tyr | Gly | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Glu | Ile | Ser | Asp | Val | Ala | Trp | Xaa | Ser | Asp | Ser | Xaa | Arg | Leu |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ser | Ala | Xaa | Xaa | Asp | Lys | Thr | Leu | Lys | Leu | Trp | Asp | Val | Arg | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Lys | Cys | Leu | Lys | Thr | Leu | Lys | Gly | His | Ser | Asn | Tyr | Val | Phe | Cys |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 5084

|   |     |         |
|---|-----|---------|
| 50  | 55  | 60      |
| Cys Asn Phe Asn Pro Pro Ser Asn Leu Ile Ile Ser Gly Ser Phe Asp |     |         |
| 65  | 70  | 75 80   |
| Glu Thr Val Lys Ile Trp Glu Val Lys Thr Gly Lys Cys Leu Lys Thr |     |         |
| 85  | 90  | 95      |
| Leu Ser Ala His Ser Asp Pro Val Ser Ala Val His Phe Asn Cys Ser |     |         |
| 100   | 105 | 110     |
| Gly Ser Leu Ile Val Ser Gly Ser Tyr Asp Gly Leu Cys Arg Ile Trp |     |         |
| 115   | 120 | 125     |
| Asp Ala Ala Ser Gly Gln Cys Leu Lys Thr Leu Val Asp Asp Asp Asn |     |         |
| 130   | 135 | 140     |
| Pro Pro Val Ser Phe Val Lys Phe Ser Pro Asn Gly Lys Tyr Ile Leu |     |         |
| 145   | 150 | 155 160 |
| Thr Ala Thr Leu Asp Asn Thr Leu Lys Leu Trp Asp Tyr Ser Arg Gly |     |         |
| 165   | 170 | 175     |
| Arg Cys Leu Lys Thr Tyr Thr Gly His Lys Asn Glu Lys Tyr Cys Ile |     |         |
| 180   | 185 | 190     |
| Phe Ala Asn Phe Ser Val Thr Gly Gly Lys Trp Ile Val Ser Gly Ser |     |         |
| 195   | 200 | 205     |
| Glu Asp Asn Arg Val Tyr Ile Trp Glu Pro Ser Asp                 |     |         |
| 210   | 215 | 220     |

&lt;210&gt; 5797

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (88)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 5085

&lt;222&gt; (101)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5797

Asp Pro Arg Val Arg Thr Arg Xaa Pro Asn Met Tyr Gln Val Val Leu  
 1 5 10 15

Leu Phe Val Val Val Pro Glu Leu Gln Glu His Gln Ser Lys Pro Ser  
 20 25 30

Arg Pro Ser Pro Arg Val Ala Asp Asn Pro Glu Glu Gly Arg Glu Pro  
 35 40 45

His Asn Asp Arg Pro Val Ser Met Ala Phe Gly Cys Gln Pro Glu His  
 50 55 60

Val Tyr Ala Glu Cys Gly Lys Thr Tyr Arg Pro Pro Pro Thr Pro Lys  
 65 70 75 80

Leu Phe Pro Gln Ser Thr Val Xaa Asn Thr Thr Pro Ser Phe Thr Ser  
 85 90 95

Gly Thr Gln Glu Xaa Leu Phe Val Phe Leu Ile Ser Ile Ser Arg Arg  
 100 105 110

Leu Phe Ser Thr Pro Leu Phe Leu Pro Pro Gln Phe Ala Ile Pro Leu  
 115 120 125

Leu Ala Leu  
 130

&lt;210&gt; 5798

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5798

Gln Pro Pro Gly Thr Arg Asp Pro Ala Pro Pro Leu Ile Thr Pro Ala  
 1 5 10 15

Thr Pro Gln Leu Ser Ala Ala Pro Asp Ala Met Asp Pro Ala Leu Ala  
 20 25 30

Ala Gln Met Ser Glu Ala Val Ala Glu Lys Met Leu Gln Tyr Arg Arg  
 35 40 45

Asp Thr Ala Gly Trp Lys Ile Cys Arg Glu Gly Asn Gly Val Ser Val  
 50 55 60

## 5086

Ser Trp Arg Pro Ser Val Glu Phe Pro Gly Asn Leu Tyr Arg Gly Glu  
65 70 75 80

Gly Ile Val Tyr Gly Thr Leu Glu Glu Val Trp Asp Cys Val Lys Pro  
85 90 95

Ala Val Gly Gly Leu Arg Val Lys Trp Asp Glu Asn Val Thr Gly Phe  
100 105 110

Glu Ile Ile Gln Ser Ile Thr Asp Thr Leu Cys Val Ser Arg Thr Ser  
115 120 125

Thr Pro Ser Ala Ala Met Lys Leu Ile Ser Pro Arg Asp Phe Val Asp  
130 135 140

Leu Val Leu Val Lys Arg Tyr Glu Asp Gly Thr Ile Ser Ser Asn Ala  
145 150 155 160

Thr His Val Glu His Pro Leu Cys Pro Pro Lys Pro Gly Phe Val Arg  
165 170 175

Gly Phe Asn His Pro Cys Gly Cys Phe Cys Glu Pro Leu Pro Gly Glu  
180 185 190

Pro Thr Lys Thr Asn Leu Val Thr Phe Phe His Thr Asp Leu Ser Gly  
195 200 205

Tyr Leu Pro Gln Asn Val Val Asp Ser Phe Phe Pro Arg Ser Met Thr  
210 215 220

Arg Phe Tyr Ala Asn Leu Gln Lys Ala Val Lys Gln Phe His Glu  
225 230 235

<210> 5799

<211> 66

<212> PRT

<213> Homo sapiens

<400> 5799

Ala Tyr Thr Thr Met Thr Glu Asn Lys Arg Leu Phe Phe Glu Thr Pro  
1 5 10 15

Ser Gln Lys Gln Asn Lys Thr Lys Lys Leu Asp Lys Cys Tyr Ile Asn  
20 25 30

Val Trp Val Val Arg Phe Tyr Phe Glu Ser Glu Val Cys Arg Tyr Ala  
35 40 45

Tyr Arg Phe Leu Glu Phe Thr Thr Phe Leu Phe Cys Ile Ile Asn Val

## 5087

50

55

60

Ile Phe

65

&lt;210&gt; 5800

&lt;211&gt; 173

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (55)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (62)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (164)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (165)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (166)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (168)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5800

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | His | Glu | Asp | Phe | Thr | Asp | Thr | Ala | Tyr | Leu | Phe | Lys | Ile | Gln | Ile |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Leu | Asn | Asp | Lys | Leu | Gln | Asn | Ala | Lys | Glu | Gln | Leu | Arg | Glu |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Phe | Ile | Met | Leu | Gln | Asn | Glu | Gln | Glu | Ile | Ser | Gln | Leu | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

## 5088

Lys Glu Ile Glu Arg Thr Xaa Gln Arg Met Lys Glu Met Xaa Ser Val  
 50 55 60

Met Lys Glu Gln Glu Gln Tyr Ile Ala Thr Gln Tyr Lys Glu Ala Ile  
 65 70 75 80

Asp Leu Gly Gln Glu Leu Arg Leu Thr Arg Glu Gln Val Gln Asn Ser  
 85 90 95

His Thr Glu Leu Ala Glu Ala Arg His Gln Gln Val Gln Ala Gln Arg  
 100 105 110

Glu Ile Glu Arg Leu Ser Ser Glu Leu Glu Asp Met Lys Gln Leu Ser  
 115 120 125

Lys Glu Lys Asp Ala His Gly Asn His Leu Ala Glu Glu Leu Gly Ala  
 130 135 140

Ser Lys Gly Arg Glu Ala Tyr Leu Glu Ala Arg Met Gln Ala Glu Ile  
 145 150 155 160

Lys Lys Leu Xaa Xaa Xaa Val Xaa Ile Ser Ser Lys Lys  
 165 170

<210> 5801

<211> 719

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (302)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5801

Phe Lys Val Ile Phe Leu Leu Gln Asp Gly Ile Val Asn Pro Thr Ile  
 1 5 10 15

Arg Lys Asp Leu Lys Thr Gly Pro Lys Phe Tyr Cys Cys Pro Ile Glu  
 20 25 30

Gly Cys Pro Arg Gly Pro Glu Arg Pro Phe Ser Gln Phe Ser Leu Val  
 35 40 45

Lys Gln His Phe Met Lys Met His Ala Glu Lys Lys His Lys Cys Ser  
 50 55 60

Lys Cys Ser Asn Ser Tyr Gly Thr Glu Trp Asp Leu Lys Arg His Ala

## 5089

|   |     |    |     |    |     |     |
|---|-----|----|-----|----|-----|-----|
| 65  |     | 70 |     | 75 |     | 80  |
| Glu Asp Cys Gly Lys Thr Phe Arg Cys Thr Cys Gly Cys Pro Tyr Ala |     |    |     |    |     |     |
|   | 85  |    | 90  |    | 95  |     |
| Ser Arg Thr Ala Leu Gln Ser His Ile Tyr Arg Thr Gly His Glu Ile |     |    |     |    |     |     |
|   | 100 |    | 105 |    | 110 |     |
| Pro Ala Glu His Arg Asp Pro Pro Ser Lys Lys Arg Lys Met Glu Asn |     |    |     |    |     |     |
|   | 115 |    | 120 |    | 125 |     |
| Cys Ala Gln Asn Gln Lys Leu Ser Asn Lys Thr Ile Glu Ser Leu Asn |     |    |     |    |     |     |
|   | 130 |    | 135 |    | 140 |     |
| Asn Gln Pro Ile Pro Arg Pro Asp Thr Gln Glu Leu Glu Ala Ser Glu |     |    |     |    |     |     |
|   | 145 |    | 150 |    | 155 | 160 |
| Ile Lys Leu Glu Pro Ser Phe Glu Asp Ser Cys Gly Ser Asn Thr Asp |     |    |     |    |     |     |
|   | 165 |    | 170 |    | 175 |     |
| Lys Gln Thr Leu Thr Thr Pro Pro Arg Tyr Pro Gln Lys Leu Leu Leu |     |    |     |    |     |     |
|   | 180 |    | 185 |    | 190 |     |
| Pro Lys Pro Lys Val Ala Leu Val Lys Leu Pro Val Met Gln Phe Ser |     |    |     |    |     |     |
|   | 195 |    | 200 |    | 205 |     |
| Val Met Pro Val Phe Val Pro Thr Ala Asp Ser Ser Ala Gln Pro Val |     |    |     |    |     |     |
|   | 210 |    | 215 |    | 220 |     |
| Val Leu Gly Val Asp Gln Gly Ser Ala Thr Gly Ala Val His Leu Met |     |    |     |    |     |     |
|   | 225 |    | 230 |    | 235 | 240 |
| Pro Leu Ser Val Gly Thr Leu Ile Leu Gly Leu Asp Ser Glu Ala Cys |     |    |     |    |     |     |
|   | 245 |    | 250 |    | 255 |     |
| Ser Leu Lys Glu Ser Leu Pro Leu Phe Lys Ile Ala Asn Pro Ile Ala |     |    |     |    |     |     |
|   | 260 |    | 265 |    | 270 |     |
| Gly Glu Pro Ile Ser Thr Gly Val Gln Val Asn Phe Gly Lys Ser Pro |     |    |     |    |     |     |
|   | 275 |    | 280 |    | 285 |     |
| Ser Asn Pro Leu Gln Glu Leu Gly Asn Thr Cys Gln Lys Xaa Ser Ile |     |    |     |    |     |     |
|   | 290 |    | 295 |    | 300 |     |
| Ser Ser Ile Asn Val Gln Thr Asp Leu Ser Tyr Ala Ser Gln Asn Phe |     |    |     |    |     |     |
|   | 305 |    | 310 |    | 315 | 320 |
| Ile Pro Ser Ala Gln Trp Ala Thr Ala Asp Ser Ser Val Ser Ser Cys |     |    |     |    |     |     |
|   | 325 |    | 330 |    | 335 |     |
| Ser Gln Thr Asp Leu Ser Phe Asp Ser Gln Val Ser Leu Pro Ile Ser |     |    |     |    |     |     |

## 5090

|   |     |         |
|---|-----|---------|
| 340   | 345 | 350     |
| Val His Thr Gln Thr Phe Leu Pro Ser Ser Lys Val Thr Ser Ser Ile |     |         |
| 355   | 360 | 365     |
| Ala Ala Gln Thr Asp Ala Phe Met Asp Thr Cys Phe Gln Ser Gly Gly |     |         |
| 370   | 375 | 380     |
| Val Ser Arg Glu Thr Gln Thr Ser Gly Ile Glu Ser Pro Thr Asp Asp |     |         |
| 385   | 390 | 395 400 |
| His Val Gln Met Asp Gln Ala Gly Met Cys Gly Asp Ile Phe Glu Ser |     |         |
| 405   | 410 | 415     |
| Val His Ser Ser Tyr Asn Val Ala Thr Gly Asn Ile Ile Ser Asn Ser |     |         |
| 420   | 425 | 430     |
| Leu Val Ala Glu Thr Val Thr His Ser Leu Leu Pro Gln Asn Glu Pro |     |         |
| 435   | 440 | 445     |
| Lys Thr Leu Asn Gln Asp Ile Glu Lys Ser Ala Pro Ile Ile Asn Phe |     |         |
| 450   | 455 | 460     |
| Ser Ala Gln Asn Ser Met Leu Pro Ser Gln Asn Met Thr Asp Asn Gln |     |         |
| 465   | 470 | 475 480 |
| Thr Gln Thr Ile Asp Leu Leu Ser Asp Leu Glu Asn Ile Leu Ser Ser |     |         |
| 485   | 490 | 495     |
| Asn Leu Pro Ala Gln Thr Leu Asp His Arg Ser Leu Leu Ser Asp Thr |     |         |
| 500   | 505 | 510     |
| Asn Pro Gly Pro Asp Thr Gln Leu Pro Ser Gly Pro Ala Gln Asn Pro |     |         |
| 515   | 520 | 525     |
| Gly Ile Asp Phe Asp Ile Glu Glu Phe Phe Ser Ala Ser Asn Ile Gln |     |         |
| 530   | 535 | 540     |
| Thr Gln Thr Glu Glu Ser Glu Leu Ser Thr Met Thr Thr Glu Pro Val |     |         |
| 545   | 550 | 555 560 |
| Leu Glu Ser Leu Asp Ile Glu Thr Gln Thr Asp Phe Leu Leu Ala Asp |     |         |
| 565   | 570 | 575     |
| Thr Ser Ala Gln Ser Tyr Gly Cys Arg Gly Asn Ser Asn Phe Leu Gly |     |         |
| 580   | 585 | 590     |
| Leu Glu Met Phe Asp Thr Gln Thr Gln Thr Asp Leu Asn Phe Phe Leu |     |         |
| 595   | 600 | 605     |
| Asp Ser Ser Pro His Leu Pro Leu Gly Ser Ile Leu Lys His Ser Ser |     |         |

## 5091

|   |     |         |
|---|-----|---------|
| 610   | 615 | 620     |
| Phe Ser Val Ser Thr Asp Ser Ser Asp Thr Glu Thr Gln Thr Glu Gly |     |         |
| 625   | 630 | 635 640 |
| Val Ser Thr Ala Lys Asn Ile Pro Ala Leu Glu Ser Lys Val Gln Leu |     |         |
|   | 645 | 650 655 |
| Asn Ser Thr Glu Thr Gln Thr Met Ser Ser Gly Phe Glu Thr Leu Gly |     |         |
|   | 660 | 665 670 |
| Ser Leu Phe Phe Thr Ser Asn Glu Thr Gln Thr Ala Met Asp Asp Phe |     |         |
|   | 675 | 680 685 |
| Leu Leu Ala Asp Leu Ala Trp Asn Thr Met Glu Ser Gln Phe Ser Ser |     |         |
|   | 690 | 695 700 |
| Val Glu Thr Gln Thr Ser Ala Glu Pro His Thr Val Ser Asn Phe     |     |         |
| 705   | 710 | 715     |

&lt;210&gt; 5802

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (36)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5802

Asn Ser Xaa Met Gln Xaa Pro Glu Trp His Phe Ala Thr Leu Ser His

1

5

10

15



## 5092

Ala Leu Ile Ala Phe Gln Asn Glu Ser Tyr Leu Arg Gln Leu Leu Trp  
                   20                  25                  30

Val Lys Ser Xaa Leu Tyr Ser Arg Val Arg Leu Leu Gly Val Cys Leu  
                   35                  40                  45

Tyr Xaa Lys Arg Gly Gly Leu Ser  
           50                  55

<210> 5803

<211> 60

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (43)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5803

Ser Val Ala Cys Lys Glu Lys Lys Met Ala Ser Asp Ile Trp Tyr Lys  
   1                  5                  10                  15

Leu Leu Asn Arg Ile Ile Arg Ala Ser Phe Val Lys Pro Ala Phe Lys  
                   20                  25                  30

Cys Trp Thr Ala Ser Lys Ser Val Cys Phe Xaa Ser Ser Val Pro Tyr  
                   35                  40                  45

Thr Lys Lys Gln Leu Leu Pro Ser Tyr Tyr Ile Cys  
           50                  55                  60

<210> 5804

<211> 55

<212> PRT

<213> Homo sapiens

<400> 5804

Phe Thr Gln Tyr Gly Ala Ala Cys Phe Cys Asp Phe Lys Ile Asp Gln  
   1                  5                  10                  15

Gly Thr Phe Ala Phe Glu Glu Arg Asn Phe Leu Gly Leu Val Thr Arg  
                   20                  25                  30

Ala Val Asp Val Pro Lys Ser Lys Asp Val Cys Cys Pro Trp Val Ser  
                   35                  40                  45

## 5093

His Cys Arg Phe Ile Thr Trp  
 50 55

<210> 5805

<211> 367

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (358)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5805

Ala Arg Gln Thr Gly Leu Glu Asp Pro Leu Arg Leu Arg Arg Ala Glu  
 1 5 10 15

Ser Thr Arg Arg Val Leu Gly Leu Glu Leu Asn Lys Asp Arg Asp Val  
 20 25 30

Glu Arg Ile His Gly Gly Gly Ile Asn Thr Leu Asp Ile Glu Pro Val  
 35 40 45

Glu Gly Arg Tyr Met Leu Ser Gly Gly Ser Asp Gly Val Ile Val Leu  
 50 55 60

Tyr Asp Leu Glu Asn Ser Ser Arg Gln Ser Tyr Tyr Thr Cys Lys Ala  
 65 70 75 80

Val Cys Ser Ile Gly Arg Asp His Pro Asp Val His Arg Tyr Ser Val  
 85 90 95

Glu Thr Val Gln Trp Tyr Pro His Asp Thr Gly Met Phe Thr Ser Ser  
 100 105 110

Ser Phe Asp Lys Thr Leu Lys Val Trp Asp Thr Asn Thr Leu Gln Thr  
 115 120 125

Ala Asp Val Phe Asn Phe Glu Glu Thr Val Tyr Ser His His Met Ser  
 130 135 140

Pro Val Ser Thr Lys His Cys Leu Val Ala Val Gly Thr Arg Gly Pro  
 145 150 155 160

Lys Val Gln Leu Cys Asp Leu Lys Ser Gly Ser Cys Ser His Ile Leu  
 165 170 175

Gln Gly His Arg Gln Glu Ile Leu Ala Val Ser Trp Ser Pro Arg Tyr  
 180 185 190

## 5094

```

Asp Tyr Ile Leu Ala Thr Ala Ser Ala Asp Ser Arg Val Lys Leu Trp
    195                      200                      205

Asp Val Arg Arg Ala Ser Gly Cys Leu Ile Thr Leu Asp Gln His Asn
    210                      215                      220

Gly Lys Lys Ser Gln Ala Val Glu Ser Ala Asn Thr Ala His Asn Gly
    225                      230                      235                      240

Lys Val Asn Gly Leu Cys Phe Thr Ser Asp Gly Leu His Leu Leu Thr
                245                      250                      255

Val Gly Thr Asp Asn Arg Met Arg Leu Trp Asn Ser Ser Asn Gly Glu
                260                      265                      270

Asn Thr Leu Val Asn Tyr Gly Lys Val Cys Asn Asn Ser Lys Lys Gly
                275                      280                      285

Leu Lys Phe Thr Val Ser Cys Gly Cys Ser Ser Glu Phe Val Phe Val
    290                      295                      300

Pro Tyr Gly Ser Thr Ile Ala Val Tyr Thr Val Tyr Ser Gly Glu Gln
    305                      310                      315                      320

Ile Thr Met Leu Lys Gly His Tyr Lys Thr Val Asp Cys Cys Val Phe
                325                      330                      335

Gln Ser Asn Phe Gln Val Leu Tyr Ser Gly Ser Arg Asp Cys Asn Ile
                340                      345                      350

Leu Ala Trp Val Pro Xaa Leu Tyr Glu Pro Val Pro Asp Asp Gly
    355                      360                      365

```

&lt;210&gt; 5806

&lt;211&gt; 72

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (28)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5095

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (51)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (68)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5806

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Xaa | Gly | Leu | Asn | Arg | Pro | Pro | Phe | Gly | Ala | Gln | Arg | Arg | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Pro | Arg | Gly | Gly | Phe | Pro | Pro | Gly | Gly | Xaa | Lys | Ile | Phe | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Pro | Gly | Gly | Gly | Phe | Pro | Gly | Lys | Pro | Pro | Pro | Lys | Thr | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Xaa | Phe | Pro | Pro | Gly | Gly | Gly | Pro | Phe | Pro | Lys | Phe | Phe | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gln | Asn | Xaa | Ser | Gln | Lys | Ile |
| 65  |     |     |     |     | 70  |     |     |

&lt;210&gt; 5807

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (45)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5807

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Val | Arg | Arg | Arg | Leu | Arg | Val | Thr | Arg | Gln | Arg | Ala | Thr | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Gln | Ser | Ala | Arg | Val | Arg | Arg | Trp | Lys | Arg | Ser | Arg | Arg | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Ile | Ala | Pro | Phe | Pro | Arg | Asp | Leu | Ser | Gly | Xaa | Arg | Ala | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gln | Pro | Arg | Ala | Pro | Ala | Leu | Arg | Pro | Arg | His | Thr | Pro | Gln | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

## 5096

Ser Ser Ser Gly Ser Ala Pro Thr Pro Arg Arg Asp Gln Pro Ala Arg  
 65 70 75 80

Gly Gly Leu Thr Ala Pro Ser Ser Gln Glu Gly Thr Gln Arg Thr Thr  
 85 90 95

Glu Pro His Ser Ala Pro Arg Ser Pro Leu Trp Leu Leu Ala Ser Arg  
 100 105 110

Pro Thr Arg Ala Ala Met Val Thr Ser Pro Pro Pro Leu  
 115 120 125

<210> 5808

<211> 227

<212> PRT

<213> Homo sapiens

<400> 5808

Lys Met Asp Trp Gly Thr Leu Gln Thr Ile Leu Gly Gly Val Asn Lys  
 1 5 10 15

His Ser Thr Ser Ile Gly Lys Ile Trp Leu Thr Val Leu Phe Ile Phe  
 20 25 30

Arg Ile Met Ile Leu Val Val Ala Ala Lys Glu Val Trp Gly Asp Glu  
 35 40 45

Gln Ala Asp Phe Val Cys Asn Thr Leu Gln Pro Gly Cys Lys Asn Val  
 50 55 60

Cys Tyr Asp His Tyr Phe Pro Ile Ser His Ile Arg Leu Trp Ala Leu  
 65 70 75 80

Gln Leu Ile Phe Val Ser Thr Pro Ala Leu Leu Val Ala Met His Val  
 85 90 95

Ala Tyr Arg Arg His Glu Lys Lys Arg Lys Phe Ile Lys Gly Glu Ile  
 100 105 110

Lys Ser Glu Phe Lys Asp Ile Glu Glu Ile Lys Thr Gln Lys Val Arg  
 115 120 125

Ile Glu Gly Ser Leu Trp Trp Thr Tyr Thr Ser Ser Ile Phe Phe Arg  
 130 135 140

Val Ile Phe Glu Ala Ala Phe Met Tyr Val Phe Tyr Val Met Tyr Asp  
 145 150 155 160

Gly Phe Ser Met Gln Arg Leu Val Lys Cys Asn Ala Trp Pro Cys Pro

**5097**

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 165 |  | 170 |  | 175 |
| Asn Thr Val Asp Cys Phe Val Ser Arg Pro Thr Glu Lys Thr Val Phe |     |  |     |  |     |
|   | 180 |  | 185 |  | 190 |
| Thr Val Phe Met Ile Ala Val Ser Gly Ile Cys Ile Leu Leu Asn Val |     |  |     |  |     |
|   | 195 |  | 200 |  | 205 |
| Thr Glu Leu Cys Tyr Leu Leu Ile Arg Tyr Cys Ser Gly Lys Ser Lys |     |  |     |  |     |
|   | 210 |  | 215 |  | 220 |
| Lys Pro Val   |     |  |     |  |     |
| 225   |     |  |     |  |     |

&lt;210&gt; 5809

&lt;211&gt; 213

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (65)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (72)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (75)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (80)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (86)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (166)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5098

&lt;400&gt; 5809

Ala Thr Val Pro Ile Arg Pro Asn Phe Thr Gly Lys Ser Ser Tyr Arg  
 1 5 10 15  
 Val Tyr Lys Leu Pro Ile Ser Gly Glu Thr Phe Asn Arg Glu Lys Phe  
 20 25 30  
 Arg Ser Gln Asp Trp Glu Asn Pro Thr Glu Arg Glu Asp Asp Ser Asp  
 35 40 45  
 Lys Tyr Cys Lys Leu Asn Leu Gln Gln Ser Gly Ser Phe Gln Tyr Tyr  
 50 55 60  
 Xaa Leu Gln Gly Asn Glu Lys Xaa Gly Gly Xaa Tyr Ile Val Val Xaa  
 65 70 75 80  
 Pro Ile Leu Arg Val Xaa Ala Asp Asn His Val Leu Pro Leu Asp Cys  
 85 90 95  
 Val Thr Leu Gln Thr Phe Leu Ala Lys Cys Leu Gly Pro Phe Asp Glu  
 100 105 110  
 Trp Glu Ser Arg Leu Arg Val Ala Lys Glu Ser Gly Tyr Asn Met Ile  
 115 120 125  
 His Phe Thr Pro Leu Gln Thr Leu Gly Leu Ser Arg Ser Cys Tyr Ser  
 130 135 140  
 Leu Ala Asn Gln Leu Glu Leu Asn Pro Asp Phe Ser Arg Pro Asn Arg  
 145 150 155 160  
 Lys Tyr Thr Trp Asn Xaa Val Gly Gln Leu Val Glu Lys Leu Lys Lys  
 165 170 175  
 Glu Trp Ile Val Phe Cys Ile Thr Asp Val Val Tyr Asn His Thr Ala  
 180 185 190  
 Ala Asn Ser Asn Cys Ile Gln Glu His Pro Glu Cys Ala Tyr Ile Leu  
 195 200 205  
 Val Ile Ser Pro His  
 210

&lt;210&gt; 5810

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 5099

&lt;221&gt; SITE

&lt;222&gt; (22)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (38)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5810

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | His | Tyr | Cys | Glu | Phe | Ile | Ile | Leu | Lys | Val | Gly | Asp | Ala | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Arg | Leu | Lys | Xaa | Tyr | Glu | Val | Phe | Ser | Ser | Phe | Asn | Ser | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Glu | Lys | Asn | Xaa | His | Asn | Arg | Gly | Ser | Phe | Thr | Phe | Pro | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Arg | Leu | Leu | Tyr | Cys | Asn | Val | Gly | Lys | Ile | Ala | Tyr | Asn | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |
|-----|-----|-----|
| Asn | Cys | Ser |
| 65  |     |     |

&lt;210&gt; 5811

&lt;211&gt; 260

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (165)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (185)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (195)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5811

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Arg | Ala | Gly | Pro | Ala | Ala | Ala | Gly | Pro | Arg | Pro | Gly | Ala | Glu | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |



## 5100

Lys Cys Trp Ser Leu Arg Ser Leu Arg Pro Leu Gly Gly Arg Cys Ala  
                   20                                  25                                  30

Trp Pro Gly Thr Ser Ala Pro Ala His Arg Pro Gly Ala Ala Glu Gly  
                   35                                  40                                  45

Arg Pro Arg Gly Pro Val Pro Ala Glu Pro Arg Pro Cys Pro Leu Ala  
                   50                                  55                                  60

Leu Leu Ser Gly His Tyr Leu Tyr Tyr His Tyr Gly Cys Asp Gly Leu  
                   65                                  70                                  75                                  80

Asp Asp Arg Gly Trp Gly Cys Gly Tyr Arg Thr Leu Gln Thr Leu Cys  
                                   85                                  90                                  95

Ser Trp Pro Glu Gly Gln Pro Ala Gly Val Pro Gly Leu Ala Ala Val  
                   100                                  105                                  110

Gln Ala Ala Leu Glu Asp Met Gly Asp Lys Pro Pro Gly Phe Arg Gly  
                   115                                  120                                  125

Ser Arg Asp Trp Ile Gly Cys Val Glu Ala Ser Leu Cys Leu Ala His  
                   130                                  135                                  140

Phe Gly Gly Pro Gln Gly Arg Leu Cys His Val Pro Arg Gly Val Gly  
                   145                                  150                                  155                                  160

Leu His Gly Glu Xaa Glu Arg Leu Tyr Ser His Phe Ala Gly Gly Gly  
                                   165                                  170                                  175

Gly Pro Val Met Val Gly Gly Asp Xaa Asp Ala Arg Ser Lys Ala Leu  
                   180                                  185                                  190

Leu Gly Xaa Cys Val Gly Ser Gly Thr Glu Ala Tyr Val Leu Val Leu  
                   195                                  200                                  205

Asp Pro His Tyr Trp Gly Thr Pro Lys Ser Pro Ser Glu Leu Gln Ala  
                   210                                  215                                  220

Ala Gly Trp Val Gly Trp Gln Glu Val Ser Ala Ala Phe Asp Pro Asn  
                   225                                  230                                  235                                  240

Ser Phe Tyr Asn Leu Cys Leu Thr Ser Leu Ser Ser Gln Gln Gln Gln  
                                   245                                  250                                  255

Arg Thr Leu Asp  
                   260

## 5101

<211> 364  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (2)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (154)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (166)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (269)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (299)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (310)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (319)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (356)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (363)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5812  
Trp Xaa Pro Arg Ala Ala Gly Ile Arg His Glu Leu Phe Gln Ala Leu

## 5102

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ile Asp Ile Gln Glu Phe Tyr Glu Val Thr Leu Leu Asp Asn Pro Lys | 20  | 25  | 30  |
| Cys Ile Asp Arg Ser Lys Pro Ser Glu Pro Ile Gln Pro Val Asn Thr | 35  | 40  | 45  |
| Trp Glu Ile Ser Ser Leu Pro Ser Ser Thr Val Thr Ser Glu Thr Leu | 50  | 55  | 60  |
| Pro Ser Ser Leu Ser Pro Ser Val Glu Lys Tyr Arg Tyr Gln Asp Glu | 65  | 70  | 75  |
| Asp Thr Pro Pro Gln Glu His Ile Ser Pro Gln Ile Thr Asn Glu Val | 85  | 90  | 95  |
| Ile Gly Pro Glu Leu Val His Val Ser Glu Lys Asn Leu Ser Glu Ile | 100 | 105 | 110 |
| Glu Asn Val His Gly Phe Val Ser His Ser His Ile Ser Pro Ile Lys | 115 | 120 | 125 |
| Pro Thr Glu Ala Val Leu Pro Ser Pro Pro Thr Val Pro Val Ile Pro | 130 | 135 | 140 |
| Val Leu Pro Val Pro Ala Glu Asn Thr Xaa Ile Leu Pro Thr Ile Pro | 145 | 150 | 155 |
| Gln Ala Asn Pro Pro Xaa Val Leu Val Asn Thr Asp Ser Leu Glu Thr | 165 | 170 | 175 |
| Pro Thr Tyr Val Asn Gly Thr Asp Ala Asp Tyr Glu Tyr Glu Glu Ile | 180 | 185 | 190 |
| Thr Leu Glu Arg Gly Asn Ser Gly Leu Gly Phe Ser Ile Ala Gly Gly | 195 | 200 | 205 |
| Thr Asp Asn Pro His Ile Gly Asp Asp Ser Ser Ile Phe Ile Thr Lys | 210 | 215 | 220 |
| Ile Ile Thr Gly Gly Ala Ala Ala Gln Asp Gly Arg Leu Arg Val Asn | 225 | 230 | 235 |
| Asp Cys Ile Leu Arg Val Asn Glu Val Asp Val Arg Asp Val Thr His | 245 | 250 | 255 |
| Ser Lys Ala Val Glu Ala Leu Lys Glu Ala Gly Ser Xaa Val Arg Leu | 260 | 265 | 270 |
| Tyr Val Lys Arg Arg Lys Pro Val Ser Glu Lys Ile Met Glu Ile Lys |     |     |     |

## 5103

|   |     |     |
|---|-----|-----|
| 275   | 280 | 285 |
| Leu Ile Lys Gly Pro Lys Gly Leu Gly Phe Xaa Ile Ala Gly Gly Val |     |     |
| 290   | 295 | 300 |
| Gly Asn Gln His Ile Xaa Gly Asp Asn Ser Ile Tyr Val Thr Xaa Ile |     |     |
| 305   | 310 | 315 |
| Ile Glu Gly Gly Ala Ala His Lys Asp Gly Lys Leu Gln Ile Gly Asp |     |     |
| 325   | 330 | 335 |
| Lys Leu Leu Ala Val Asn Asn Val Cys Leu Glu Glu Val Thr His Glu |     |     |
| 340   | 345 | 350 |
| Glu Ala Val Xaa Ala Leu Lys Ser Thr Ser Xaa Phe                 |     |     |
| 355   | 360 |     |

&lt;210&gt; 5813

&lt;211&gt; 277

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (45)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5813

|   |     |     |    |
|---|-----|-----|----|
| Gly Ser Cys Ser Ser Arg Cys Asp Ser Arg Asn Gln Arg His Leu Arg |     |     |    |
| 1   | 5   | 10  | 15 |
| Val Ser Arg Lys Pro Pro Phe Val Val Ser Arg Thr Glu Gly Tyr Ile |     |     |    |
| 20  | 25  | 30  |    |
| Gly Val Leu Ile Asp Asp Leu Thr Thr Leu Gly Thr Xaa Glu Pro Tyr |     |     |    |
| 35  | 40  | 45  |    |
| Arg Met Phe Thr Ser Arg Val Glu Phe Arg Leu Ser Leu Arg Pro Asp |     |     |    |
| 50  | 55  | 60  |    |
| Asn Ala Asp Ser Arg Leu Thr Leu Arg Gly Tyr Lys Asp Ala Gly Cys |     |     |    |
| 65  | 70  | 75  | 80 |
| Val Ser Gln Gln Arg Tyr Glu Arg Ala Cys Trp Met Lys Ser Ser Leu |     |     |    |
| 85  | 90  | 95  |    |
| Glu Glu Gly Ile Ser Val Leu Lys Ser Ile Glu Phe Leu Ser Ser Lys |     |     |    |
| 100   | 105 | 110 |    |

## 5104

Trp Lys Lys Leu Ile Pro Glu Ala Ser Ile Ser Thr Ser Arg Ser Leu  
 115 120 125  
 Pro Val Arg Ala Leu Asp Val Leu Lys Tyr Glu Glu Val Asp Met Asp  
 130 135 140  
 Ser Leu Ala Lys Ala Val Pro Glu Pro Leu Lys Lys Tyr Thr Lys Cys  
 145 150 155 160  
 Arg Glu Leu Ala Glu Arg Leu Lys Ile Glu Ala Thr Tyr Glu Ser Val  
 165 170 175  
 Leu Phe His Gln Leu Gln Glu Ile Lys Gly Val Gln Gln Asp Glu Ala  
 180 185 190  
 Leu Gln Leu Pro Lys Asp Leu Asp Tyr Leu Thr Ile Arg Asp Val Ser  
 195 200 205  
 Leu Ser His Glu Val Arg Glu Lys Leu His Phe Ser Arg Pro Gln Thr  
 210 215 220  
 Ile Gly Ala Ala Ser Arg Ile Pro Gly Val Thr Pro Ala Ala Ile Ile  
 225 230 235 240  
 Asn Leu Leu Arg Phe Val Lys Thr Thr Gln Arg Arg Gln Ser Ala Met  
 245 250 255  
 Asn Glu Ser Ser Lys Thr Asp Gln Tyr Leu Cys Asp Ala Asp Arg Leu  
 260 265 270  
 Gln Glu Arg Glu Leu  
 275

&lt;210&gt; 5814

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5814

Ile Phe His Arg Val Leu Leu Cys Asp Leu Asn Phe Ser Leu Gly Pro  
 1 5 10 15  
 Ala Ser Asp Ile Val Gly Gly Leu Ser Trp Phe Gln Glu Ile Arg Leu  
 20 25 30  
 Ala Phe Ser Ser  
 35

## 5105

&lt;210&gt; 5815

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5815

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Ser | Gln | Glu | Ser | Ala | Lys | Ala | Leu | Met | Ile | Arg | Glu | Lys | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Ser | Pro | Thr | His | Leu | Pro | Ala | Asp | His | Ile | Pro | Val | Pro | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Arg | Ala | Asp | Thr | Ala | Pro | Pro | Glu | Glu | Gly | Leu | Pro | Asp | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Pro | Pro | Pro | Leu | Pro | Gln | Glu | Asp | Pro | Tyr | Cys | Leu | Asp | Asp | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Asn | Leu | Asp | Tyr | Leu | Val | His | Met | Gln | Gly | Gly | Ile | Leu | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Tyr | Asp | Asn | Lys | Lys | Met | Leu | Glu | His | Gln | Glu | Pro | His | Ser | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Tyr | Pro | Asp | Leu | Glu | Thr | Tyr | Thr | Val | Asp | Met | Ser | His | Ile | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Ile | Thr | Asp | Gly | Pro | Thr | Lys | Thr | Tyr | Cys | His | Arg | Arg | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Phe | Leu | Glu | Ser | Lys | Phe | Ser | Leu | His | Glu | Met | Leu | Asn | Glu | Met |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Glu | Phe | Lys | Glu | Leu | Lys | Ser | Asn | Pro | His | Arg | Asp | Phe | Tyr | Asn |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

&lt;210&gt; 5816

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5816

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Lys | Tyr | Leu | Leu | Trp | Asp | Lys | Ile | Leu | Tyr | Ala | Tyr | Leu | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 5106

Tyr Trp Glu Asp Gly Lys Glu Tyr Lys Glu Lys Asn Asn Cys Thr Pro  
20 25 30

His Ser Arg His Asn Leu Leu Phe Thr Ser Leu Gly Cys Ile Ser Ile  
35 40 45

Pro Thr Arg Trp Asn His Leu Tyr Val Tyr Leu Ile Arg Ile Met Leu  
50 55 60

His Thr Val Leu Phe Pro Ser  
65 70

<210> 5817

<211> 23

<212> PRT

<213> Homo sapiens

<400> 5817

Lys Lys Ala Trp Glu Pro Val Cys Phe Glu Arg Thr Asp Asp Ile Gly  
1 5 10 15

Arg Ala Leu Glu Val Pro Gly  
20

<210> 5818

<211> 155

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (5)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (7)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (12)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (48)

## 5107

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5818

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | His | Pro | Thr | Xaa | Trp | Xaa | Gln | Leu | Glu | Glu | Xaa | Cys | Arg | Arg | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Glu | Val | Ser | Lys | Pro | Pro | Lys | Gln | Arg | Cys | Cys | Val | Ala | Ser | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Arg | Asp | Arg | Asn | His | Ser | Ala | Thr | Val | Gln | Thr | Gly | Ala | Thr | Xaa |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Ser | Asn | Pro | Ser | Leu | Ala | Pro | Glu | Asp | His | Lys | Glu | Pro | Lys | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Ala | Gly | Val | His | Ala | Leu | Gln | Ala | Ser | Glu | Leu | Val | Val | Thr | Tyr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Phe | Phe | Cys | Gly | Glu | Glu | Ile | Pro | Tyr | Arg | Arg | Met | Leu | Lys | Ala | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Leu | Thr | Leu | Gly | His | Phe | Lys | Glu | Gln | Leu | Ser | Lys | Lys | Gly | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Tyr | Arg | Tyr | Tyr | Phe | Lys | Lys | Ala | Ser | Asp | Glu | Phe | Ala | Cys | Gly | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Val | Phe | Glu | Glu | Ile | Trp | Glu | Asp | Glu | Thr | Val | Leu | Pro | Met | Tyr | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gly | Arg | Ile | Leu | Gly | Lys | Val | Glu | Arg | Ile | Asp |     |     |     |     |     |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     |     |

<210> 5819

<211> 317

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (20)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (113)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>



## 5108

&lt;221&gt; SITE

&lt;222&gt; (116)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (245)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5819

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Lys | Leu | Asn | Glu | Leu | Glu | Lys | Ile | Cys | Glu | Ile | Leu | Gln | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Tyr | Xaa | Leu | Val | Thr | Glu | Leu | Asn | Asp | Ser | Arg | Ser | Glu | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Thr | Ala | Thr | Arg | Lys | Met | Ala | Glu | Glu | Val | Gly | Lys | Leu | Leu | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Lys | Ile | Leu | Asn | Asp | Asp | Ser | Gly | Leu | Leu | His | Gly | Glu | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Glu | Asp | Ile | Pro | Gly | Gly | Glu | Phe | Gly | Glu | Gln | Pro | Asn | Glu | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Pro | Val | Ser | Leu | Ala | Pro | Leu | Asp | Glu | Ser | Asn | Ser | Tyr | Glu | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Leu | Ser | Asp | Lys | Glu | Val | Gln | Met | His | Phe | Ala | Glu | Leu | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Lys | Phe | Xaa | Ser | Leu | Gln | Ser | Glu | His | Lys | Ile | Leu | His | Asp | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Cys | Gln | Met | Ser | Ser | Lys | Met | Ser | Glu | Leu | Gln | Thr | Tyr | Val | Asp |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Lys | Ala | Glu | Asn | Leu | Val | Leu | Ser | Thr | Asn | Leu | Arg | Asn | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Asp | Leu | Val | Lys | Glu | Met | Gln | Leu | Gly | Leu | Glu | Glu | Gly | Leu |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Ser | Leu | Ser | Ser | Ser | Cys | Val | Pro | Asp | Ser | Ser | Ser | Leu | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Gly | Asp | Ser | Ser | Phe | Tyr | Arg | Ala | Leu | Leu | Glu | Gln | Thr | Gly |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Met | Ser | Leu | Leu | Ser | Asn | Leu | Glu | Gly | Ala | Val | Ser | Ala | Asn | Gln |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

## 5109

Cys Ser Val Asp Glu Val Phe Cys Ser Ser Leu Gln Glu Glu Asn Leu  
 225 230 235 240

Thr Arg Lys Glu Xaa Pro Ser Ala Pro Ala Lys Gly Val Glu Glu Leu  
 245 250 255

Glu Ser Leu Cys Glu Val Tyr Arg Gln Ser Leu Glu Lys Leu Glu Glu  
 260 265 270

Lys Met Glu Ser Gln Gly Ile Met Lys Asn Lys Glu Ile Gln Glu Leu  
 275 280 285

Glu Gln Leu Leu Ser Ser Glu Gly Lys Ser Leu Thr Ala Leu Gly Ala  
 290 295 300

Val Phe Val Arg His Asp Ser Gly Thr Glu Leu Thr Ala  
 305 310 315

<210> 5820

<211> 55

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (13)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (52)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5820

Pro Asn Trp Glu Lys Lys Cys Ile Arg Leu Ala Leu Xaa Thr Arg Glu  
 1 5 10 15

Gln His Ile Arg Arg Asp Lys Ala Thr Ser Asn Ile Cys Thr Ala Gln  
 20 25 30

Ala Leu Leu Ala Asn Met Ala Ala Met Phe Ala Ile Tyr His Gly Ser  
 35 40 45

His Gly Leu Xaa His Ile Ala  
 50 55

## 5110

&lt;210&gt; 5821

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5821

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Gln | Asn | Lys | Gly | Gln | Tyr | Arg | Lys | Tyr | His | Gly | Val | Tyr | Asn | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Phe | Trp | Leu | Pro | Ile | Gln | Thr | Gly | Leu | Asn | Gly | Met | Phe | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Lys | Glu | Phe | Ala | Met | Asp | Lys | Ile | Tyr | Leu | Ala | Tyr | Cys | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Val | Arg | Pro | Ala | Val | Thr | Leu | Val | Phe | Pro | His | Ser | Met | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Glu | Arg | Lys | Thr |
| 65  |     |     |     | 70  |     |

&lt;210&gt; 5822

&lt;211&gt; 465

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5822

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Lys | Leu | Leu | Lys | Asp | Cys | Val | Leu | Leu | His | Leu | Pro | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Ser | Pro | Pro | Val | Ser | His | Ser | Val | Thr | Met | Val | Gln | Trp | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Cys | Gln | Leu | His | Tyr | Leu | Trp | Ala | Leu | Gly | Cys | Tyr | Met | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Thr | Val | Ala | Leu | Lys | Leu | Ser | Phe | Arg | Leu | Lys | Cys | Asp | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | His | Leu | Gly | Leu | Glu | Ser | Arg | Glu | Ser | Gln | Ser | Gln | Tyr | Cys | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ile | Leu | Tyr | Asn | Phe | Leu | Lys | Leu | Pro | Ala | Lys | Arg | Ser | Ile | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ser | Gly | Val | Thr | Arg | Gly | Asp | Gln | Glu | Ala | Val | Leu | Gln | Ala | Ile |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Asn | Leu | Glu | Val | Lys | Lys | Lys | Arg | Glu | Pro | Phe | Thr | Asp | Thr |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5111

|   |     |     |
|---|-----|-----|
| 115   | 120 | 125 |
| His Tyr Leu Ser Leu Thr Arg Asp Cys Glu His Phe Lys Ala Glu Arg |     |     |
| 130   | 135 | 140 |
| Lys Phe Ile Gln Phe Pro Leu Ser Lys Glu Glu Val Glu Phe Pro Ile |     |     |
| 145   | 150 | 155 |
| Ala Tyr Ser Met Val Ile His Glu Lys Ile Glu Asn Phe Glu Arg Leu |     |     |
|   | 165 | 170 |
| Leu Arg Ala Val Tyr Ala Pro Gln Asn Ile Tyr Cys Val His Val Asp |     |     |
|   | 180 | 185 |
| Glu Lys Ser Pro Glu Thr Phe Lys Glu Ala Val Lys Ala Ile Ile Ser |     |     |
|   | 195 | 200 |
| Cys Phe Pro Asn Val Phe Ile Ala Ser Lys Leu Val Arg Val Val Tyr |     |     |
|   | 210 | 215 |
| Ala Ser Trp Ser Arg Val Gln Ala Asp Leu Asn Cys Met Glu Asp Leu |     |     |
|   | 225 | 230 |
| Leu Gln Ser Ser Val Pro Trp Lys Tyr Phe Leu Asn Thr Cys Gly Thr |     |     |
|   | 245 | 250 |
| Asp Phe Pro Ile Lys Ser Asn Ala Glu Met Val Gln Ala Leu Lys Met |     |     |
|   | 260 | 265 |
| Leu Asn Gly Arg Asn Ser Met Glu Ser Glu Val Pro Pro Lys His Lys |     |     |
|   | 275 | 280 |
| Glu Thr Arg Trp Lys Tyr His Phe Glu Val Val Arg Asp Thr Leu His |     |     |
|   | 290 | 295 |
| Leu Thr Asn Lys Lys Lys Asp Pro Pro Pro Tyr Asn Leu Thr Met Phe |     |     |
|   | 305 | 310 |
| Thr Gly Asn Ala Tyr Ile Val Ala Ser Arg Asp Phe Val Gln His Val |     |     |
|   | 325 | 330 |
| Leu Lys Asn Pro Lys Ser Gln Gln Leu Ile Glu Trp Val Lys Asp Thr |     |     |
|   | 340 | 345 |
| Tyr Ser Pro Asp Glu His Leu Trp Ala Thr Leu Gln Arg Ala Arg Trp |     |     |
|   | 355 | 360 |
| Met Pro Gly Ser Val Pro Asn His Pro Lys Tyr Asp Ile Ser Asp Met |     |     |
|   | 370 | 375 |
| Thr Ser Ile Ala Arg Leu Val Lys Trp Gln Gly His Glu Gly Asp Ile |     |     |

## 5112

385                      390                      395                      400

Asp Lys Gly Ala Pro Tyr Ala Pro Cys Ser Gly Ile His Gln Arg Ala  
405 410 415

Ile Cys Val Tyr Gly Ala Gly Asp Leu Asn Trp Met Leu Gln Asn His  
420 425 430

His Leu Leu Ala Asn Lys Phe Asp Pro Lys Val Asp Asp Asn Ala Leu  
435 440 445

Gln Cys Leu Glu Glu Tyr Leu Arg Tyr Lys Ala Ile Tyr Gly Thr Glu  
450 455 460

Leu  
465

<210> 5823

<211> 65

<212> PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

&lt;222&gt; (24)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5823

His Gln Pro His Gly Ser Pro Glu Leu Cys Trp Lys Val Glu Thr Gly  
1 5 10 15

Arg Glu Ala Ser His Gly Ser Xaa Glu Pro Asp Pro Thr Asn Gln Leu  
20 25 30

Ile Phe Lys Arg Gln Asp Gly Gly Arg Asp His Ser Arg Glu Pro Cys  
35 40 45

Ser Leu Phe Leu Pro Val Ala Lys Ser Gly Ala Arg Lys Ser Leu Ser  
50 55 60

```
Val
  65
```

<210> 5824

 $\langle 211 \rangle$  101

&lt;212&gt; PRT

<213> Homo sapiens

## 5113

&lt;400&gt; 5824

```

Asp Leu Gly Leu Glu Gly Trp Gly Met Gly Arg Glu Gly His Ser Leu
 1             5             10             15

Leu Leu His Glu Ser Asp Ile Ser Glu Thr Glu Gln Leu Pro Asp Ala
      20             25             30

Trp Val Arg Asn Pro Arg Pro His Leu Leu Arg Thr Gly Ser Ser Glu
      35             40             45

Ser Thr Leu Arg Glu Lys Gly Glu Asn Ile Thr Ser Val Asp Ser Pro
      50             55             60

Ala Thr Thr Ala Leu Glu Glu Lys Ala Ala Ala Thr Ser Gln Arg Gly
      65             70             75             80

Val Lys Asp Pro Cys Pro Arg Asn Arg Ala Ala Pro Pro Ala Leu Thr
      85             90             95

Pro Leu Thr Phe Ser
      100

```

&lt;210&gt; 5825

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5825

```

His Val Ser Phe Ala Leu Leu Val Phe Tyr Val Ile Ser Phe Asn Cys
 1             5             10             15

Leu Leu His Leu Thr Val Tyr Ile Ile Gln Gln Phe Thr Ser Leu Asn
      20             25             30

Ser Arg Trp Lys Asn Arg Cys Gln Ser Met Lys Ile Phe Pro Ser Ile
      35             40             45

Ser Lys Tyr Phe Ser Arg Ile Tyr Phe Ser Lys Gln Thr Ile
      50             55             60

```

&lt;210&gt; 5826

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 5114

&lt;221&gt; SITE

&lt;222&gt; (131)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5826

Val Leu Glu Leu Asp Gln Glu Glu Leu Gln Leu Gly Arg Gly Gly Ala  
 1 5 10 15

Pro Arg Arg Ala Arg Ala Ala Arg Arg Gly Val Leu Leu Leu Ala His  
 20 25 30

Arg Glu Pro Pro Pro Ala Arg Ala Glu Ala Pro Ser Arg Gln Ala Ala  
 35 40 45

Cys Leu Pro Pro Leu Ser Ile Ser Pro Glu Ser Gln Pro Gly Ala Pro  
 50 55 60

Gly Pro Leu Pro Leu Ser Gly Trp Arg Ser Ser Arg Pro Leu Pro Val  
 65 70 75 80

Ser Leu Leu Leu Ser Leu Gly Ser Gln Pro Pro Leu Ser Phe Ser Trp  
 85 90 95

Thr Gly Ser His Pro Leu Arg Ser Pro Ser Phe Ser Ser Gly Ser Leu  
 100 105 110

Pro Leu Pro Leu Ala His Lys Pro Arg Ser Pro Lys Leu Leu Ser His  
 115 120 125

Phe Pro Xaa Pro Lys Val Pro Ala Phe Leu Leu Pro Phe Leu Cys Thr  
 130 135 140

Ile Pro Ile Leu Pro Phe Leu Tyr  
 145 150

&lt;210&gt; 5827

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5827

Pro Ile Glu Ile Glu Arg Cys Glu Pro Val Arg Ser Lys Leu Glu Glu  
 1 5 10 15

Val Gln Arg Lys Leu Gly Phe Ala Leu Ser Asp Ile Ser Val Val Ser  
 20 25 30

Asn Tyr Ser Ser Glu Trp Glu Leu Asp Pro Val Lys Asp Val Leu Ile  
 35 40 45

## 5115

Leu Ser Ala Leu Arg Arg Met Leu Trp Ala Ala Asp Asp Phe Leu Glu  
 50 55 60

Asp Leu Pro Phe Glu Gln Ile Gly Asn Leu Arg Glu Glu Ile Ile Asn  
 65 70 75 80

Cys Ala Gln Gly Lys Lys  
 85

<210> 5828

<211> 154

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (59)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5828

Ala Thr Val His Pro Ala Cys Gln Ile Phe Pro His Tyr Thr Pro Ser  
 1 5 10 15

Val Ala Tyr Pro Trp Ser Pro Glu Ala His Pro Leu Ile Cys Gly Pro  
 20 25 30

Pro Gly Leu Asp Lys Arg Leu Leu Pro Glu Thr Pro Gly Pro Cys Tyr  
 35 40 45

Ser Asn Ser Gln Pro Val Trp Leu Cys Leu Xaa Pro Arg Gln Pro Leu  
 50 55 60

Glu Pro His Pro Pro Gly Glu Gly Pro Ser Glu Trp Ser Ser Asp Thr  
 65 70 75 80

Ala Glu Gly Arg Pro Cys Pro Tyr Pro His Cys Gln Val Cys Arg Pro  
 85 90 95

Ser Leu Ala Gln Arg Arg Asn Ser Arg Ser Cys Val Asn Arg Leu Cys  
 100 105 110

Glu Met Phe Arg Pro Ser Ser Asn Gln Glu Cys Ala Pro Asp Val Phe  
 115 120 125

Gly Pro Tyr Leu Ala Gln Ser Pro Ala Pro Gly Lys Gly Lys Asp His  
 130 135 140

Ser Lys His His Ser Phe Cys Arg Thr Ser



## 5116

145

150

&lt;210&gt; 5829

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5829

Ile Phe Phe Leu Ile Ala Leu Leu Val Lys Ser Glu Lys Lys Asn Gln  
1 5 10 15  
Arg Arg Phe Glu Thr Gly Ala Leu Cys Ala Arg Met Thr Lys Cys Thr  
20 25 30  
Ser Phe Arg Val Cys Met Leu Val Asn Ser Gln Ile Tyr Leu Tyr Phe  
35 40 45  
Phe Ala Ser Ile Glu  
50

&lt;210&gt; 5830

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5830

Lys Asn Phe Glu Ser Thr Tyr Asn Leu Glu Pro Pro Arg Ser Thr Phe  
1 5 10 15  
Glu Leu Ser Tyr Leu Ser Gly Gln Lys Gln Cys Gly Ser Cys Met Tyr  
20 25 30  
Leu Ile Asp Val Ser Cys Leu Pro Lys Met Tyr Thr Ile Arg Leu Cys  
35 40 45  
Pro Asp His Pro Gly His Met Phe Ser Gly Pro Pro Glu Val Ser Val  
50 55 60  
Ser Gly His Trp Ser Leu Arg Phe Gly Ser Glu  
65 70 75

&lt;210&gt; 5831

&lt;211&gt; 356

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5117

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5831

Ala Leu Leu Ser Trp Glu Met Ser Ala Ala Cys Trp Glu Glu Pro Trp  
 1 5 10 15

Gly Leu Pro Gly Gly Phe Ala Lys Xaa Val Leu Val Thr Gly Gly Ala  
 20 25 30

Gly Phe Ile Ala Ser His Met Ile Val Ser Leu Val Glu Asp Tyr Pro  
 35 40 45

Asn Tyr Met Ile Ile Asn Leu Asp Lys Leu Asp Tyr Cys Ala Ser Leu  
 50 55 60

Lys Asn Leu Glu Thr Ile Ser Asn Lys Gln Asn Tyr Lys Phe Ile Gln  
 65 70 75 80

Gly Asp Ile Cys Asp Ser His Phe Val Lys Leu Leu Phe Glu Thr Glu  
 85 90 95

Lys Ile Asp Ile Val Leu His Phe Ala Ala Gln Thr His Val Asp Leu  
 100 105 110

Ser Phe Val Arg Ala Phe Glu Phe Thr Tyr Val Asn Val Tyr Gly Thr  
 115 120 125

His Val Leu Val Ser Ala Ala His Glu Ala Arg Val Glu Lys Phe Ile  
 130 135 140

Tyr Val Ser Thr Asp Glu Val Tyr Gly Gly Ser Leu Asp Lys Glu Phe  
 145 150 155 160

Asp Glu Ser Ser Pro Lys Gln Pro Thr Asn Pro Tyr Ala Ser Ser Lys  
 165 170 175

Ala Ala Ala Glu Cys Phe Val Gln Ser Tyr Trp Glu Gln Tyr Lys Phe  
 180 185 190

Pro Val Val Ile Thr Arg Ser Ser Asn Val Tyr Gly Pro His Gln Tyr  
 195 200 205

Pro Glu Lys Val Ile Pro Lys Phe Ile Ser Leu Leu Gln His Asn Arg  
 210 215 220

Lys Cys Cys Ile His Gly Ser Gly Leu Gln Thr Arg Asn Phe Leu Tyr  
 225 230 235 240

## 5118

Ala Thr Asp Val Val Glu Ala Phe Leu Thr Val Leu Lys Lys Gly Lys  
                           245                          250                          255

Pro Gly Glu Ile Tyr Asn Ile Gly Thr Asn Phe Glu Met Ser Val Val  
                           260                          265                          270

Gln Leu Ala Lys Glu Leu Ile Gln Leu Ile Lys Glu Thr Asn Ser Glu  
                           275                          280                          285

Ser Glu Met Glu Asn Trp Val Asp Tyr Val Asn Asp Arg Pro Thr Asn  
                           290                          295                          300

Asp Met Arg Tyr Pro Met Lys Ser Glu Lys Ile His Gly Leu Gly Trp  
                           305                          310                          315                          320

Arg Pro Lys Val Pro Trp Lys Glu Gly Ile Lys Lys Thr Ile Glu Trp  
                           325                          330                          335

Tyr Arg Glu Asn Phe His Asn Trp Lys Asn Val Glu Lys Ala Leu Glu  
                           340                          345                          350

Pro Phe Pro Val  
                           355

<210> 5832

<211> 52

<212> PRT

<213> Homo sapiens

<400> 5832

Ala Lys Thr Ser His Leu Glu Phe Gly Lys Ile Arg Ile Ser Gln Val  
           1                          5                          10                          15

Glu His Leu Leu Asn Ala Arg Ile Val Ser Met His Phe Lys Ser Ile  
                           20                          25                          30

Phe Asn Leu Tyr Tyr Ser Leu Ile Ile Gly Ile Met Thr Pro Glu Gln  
                           35                          40                          45

Arg Gln Leu Ser  
                           50

<210> 5833

<211> 55

<212> PRT

<213> Homo sapiens

## 5119

&lt;400&gt; 5833

Thr Arg Met Pro Ser Lys Ala Ala Leu Met Glu Glu Ala Lys Leu Met  
1 5 10 15

Ala Ser Leu Trp His Leu Ala Ala Met Ala Phe Ile Thr Tyr Val Leu  
20 25 30

Leu Ala Gly Met Ala Leu Gly Ile Gln Lys Arg Ser Val Pro Ser Pro  
35 40 45

Ser Leu Thr Leu Pro Ser Leu  
50 55

&lt;210&gt; 5834

&lt;211&gt; 231

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (21)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5120

<220>  
<221> SITE  
<222> (90)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (140)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (152)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (159)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (189)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (195)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (198)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (202)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (203)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (217)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>

## 5121

&lt;221&gt; SITE

&lt;222&gt; (219)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5834

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Cys | Xaa | Ala | Xaa | Ala | Pro | Ser | Val | Pro | Ala | Trp | Gln | Val | Leu | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | His | Asn | Xaa | Xaa | Arg | Leu | Val | Glu | Phe | Ser | Ala | Phe | Leu | Glu | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Arg | Asp | Pro | Asp | Ser | Tyr | Asn | Lys | His | Leu | Phe | Val | His | Ile | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ala | Asn | His | Ser | Tyr | Ser | Asp | Pro | Leu | Leu | Glu | Ser | Val | Asp | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gln | Ile | Tyr | Asp | Lys | Phe | Pro | Glu | Lys | Lys | Gly | Gly | Leu | Lys | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Gly | Lys | Gly | Pro | Gln | Asn | Ala | Xaa | Phe | Leu | Val | Lys | Phe | Trp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Leu | Asn | Cys | Asn | Ile | Gln | Asp | Asp | Ala | Gly | Ala | Phe | Tyr | Gly |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Thr | Ser | Gln | Tyr | Glu | Ser | Ser | Glu | Asn | Met | Thr | Val | Thr | Cys | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Lys | Val | Cys | Ser | Phe | Gly | Lys | Gln | Val | Val | Xaa | Lys | Val | Glu | Thr |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Tyr | Ala | Arg | Phe | Glu | Asn | Xaa | Arg | Phe | Val | Tyr | Arg | Ile | Xaa | Arg |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Met | Cys | Glu | Tyr | Met | Ile | Asn | Phe | Ile | His | Lys | Leu | Lys | His |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     | 175 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Pro | Glu | Lys | Tyr | Met | Met | Asn | Ser | Val | Leu | Glu | Xaa | Phe | Thr | Ile |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Xaa | Val | Thr | Xaa | Arg | Asp | Thr | Xaa | Xaa | Thr | Leu | Leu | Cys | Met |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Val | Phe | Glu | Val | Ser | Asn | Xaa | Glu | Xaa | Gly | Ala | Gln | His | His |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Ile | Tyr | Arg | Leu | Val | Lys | Asp |
| 225 |     |     |     |     | 230 |     |

## 5122

&lt;210&gt; 5835

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5835

Ala Asp Leu Arg Glu Gln Arg Gly Leu Arg Gln Ala Thr Asp His Gln  
 1 5 10 15

Glu Leu Val Glu Ile Pro Thr Arg Pro Leu Leu Thr Lys Leu Ser Leu  
 20 25 30

Ile Thr Ala Pro Arg Arg Gly Glu Arg Ala Pro Val Pro Leu Arg Ala  
 35 40 45

Gly Gly His Ser Thr Gly Asp Thr Ala  
 50 55

&lt;210&gt; 5836

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (21)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5836

Ile Ala His Tyr Phe Leu Tyr Arg Tyr Leu Lys Lys Thr Val Tyr Gly  
 1 5 10 15

Leu His Phe Phe Xaa Cys His Ile Gly Leu Met Leu Leu Ser Asn Gly  
 20 25 30

Gly Ala Arg Ser His His Ser Leu Ser Pro Gln Ile Asp Phe Val Pro  
 35 40 45

Pro Ser Asn Lys Leu Ser Lys Ser  
 50 55

&lt;210&gt; 5837

&lt;211&gt; 555

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5123

&lt;400&gt; 5837

Gln Tyr Arg Ser Glu Phe Pro Gly Arg Pro Thr Arg Pro Ala Val Thr  
 1 5 10 15  
 Ala Thr Ala Ala Ser Asp Arg Met Glu Ser Asp Ser Asp Ser Asp Lys  
 20 25 30  
 Ser Ser Asp Asn Ser Gly Leu Lys Arg Lys Thr Pro Ala Leu Lys Met  
 35 40 45  
 Ser Val Ser Lys Arg Ala Arg Lys Ala Ser Ser Asp Leu Asp Gln Ala  
 50 55 60  
 Ser Val Ser Pro Ser Glu Glu Glu Asn Ser Glu Ser Ser Ser Glu Ser  
 65 70 75 80  
 Glu Lys Thr Ser Asp Gln Asp Phe Thr Pro Glu Lys Lys Ala Ala Val  
 85 90 95  
 Arg Ala Pro Arg Arg Gly Pro Leu Gly Gly Arg Lys Lys Lys Lys Ala  
 100 105 110  
 Pro Ser Ala Ser Asp Ser Asp Ser Lys Ala Asp Ser Asp Gly Ala Lys  
 115 120 125  
 Pro Glu Pro Val Ala Met Ala Arg Ser Ala Ser Ser Ser Ser Ser  
 130 135 140  
 Ser Ser Ser Ser Asp Ser Asp Val Ser Val Lys Lys Pro Pro Arg Gly  
 145 150 155 160  
 Arg Lys Pro Ala Glu Lys Pro Leu Pro Lys Pro Arg Gly Arg Lys Pro  
 165 170 175  
 Lys Pro Glu Arg Pro Pro Ser Ser Ser Ser Ser Asp Ser Asp Ser Asp  
 180 185 190  
 Glu Val Asp Arg Ile Ser Glu Trp Lys Arg Arg Asp Glu Ala Arg Arg  
 195 200 205  
 Arg Glu Leu Glu Ala Arg Arg Arg Arg Glu Gln Glu Glu Glu Leu Arg  
 210 215 220  
 Arg Leu Arg Glu Gln Glu Lys Glu Glu Lys Glu Arg Arg Arg Glu Arg  
 225 230 235 240  
 Ala Asp Arg Gly Glu Ala Glu Arg Gly Ser Gly Gly Ser Ser Gly Asp  
 245 250 255  
 Glu Leu Arg Glu Asp Asp Glu Pro Val Lys Lys Arg Gly Arg Lys Gly  
 260 265 270



## 5124

Arg Gly Arg Gly Pro Pro Ser Ser Ser Asp Ser Glu Pro Glu Ala Glu  
 275 280 285  
 Leu Glu Arg Glu Ala Lys Lys Ser Ala Lys Lys Pro Gln Ser Ser Ser  
 290 295 300  
 Thr Glu Pro Ala Arg Lys Pro Gly Gln Lys Glu Lys Arg Val Arg Pro  
 305 310 315 320  
 Glu Glu Lys Gln Gln Ala Lys Pro Val Lys Val Glu Arg Thr Arg Lys  
 325 330 335  
 Arg Ser Glu Gly Phe Ser Met Asp Arg Lys Val Glu Lys Lys Lys Glu  
 340 345 350  
 Pro Ser Val Glu Glu Lys Leu Gln Lys Leu His Ser Glu Ile Lys Phe  
 355 360 365  
 Ala Leu Lys Val Asp Ser Pro Asp Val Lys Arg Cys Leu Asn Ala Leu  
 370 375 380  
 Glu Glu Leu Gly Thr Leu Gln Val Thr Ser Gln Ile Leu Gln Lys Asn  
 385 390 395 400  
 Thr Asp Val Val Ala Thr Leu Lys Lys Ile Arg Arg Tyr Lys Ala Asn  
 405 410 415  
 Lys Asp Val Met Glu Lys Ala Ala Glu Val Tyr Thr Arg Leu Lys Ser  
 420 425 430  
 Arg Val Leu Gly Pro Lys Ile Glu Ala Val Gln Lys Val Asn Lys Ala  
 435 440 445  
 Gly Met Glu Lys Glu Lys Ala Glu Glu Lys Leu Ala Gly Glu Glu Leu  
 450 455 460  
 Ala Gly Glu Glu Ala Pro Gln Glu Lys Ala Glu Asp Lys Pro Ser Thr  
 465 470 475 480  
 Asp Leu Ser Ala Pro Val Asn Gly Glu Ala Thr Ser Gln Lys Gly Glu  
 485 490 495  
 Ser Ala Glu Asp Lys Glu His Glu Glu Gly Arg Asp Ser Glu Glu Gly  
 500 505 510  
 Pro Arg Cys Gly Ser Ser Glu Asp Leu His Asp Ser Val Arg Glu Gly  
 515 520 525  
 Pro Asp Leu Asp Arg Pro Gly Ser Asp Arg Gln Glu Arg Glu Arg Ala  
 530 535 540

## 5125

Arg Gly Asp Ser Glu Ala Leu Asp Glu Glu Ser  
 545 550 555

<210> 5838

<211> 227

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (26)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (208)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5838

Gln His Pro Gln Pro Ala Asp Ser Arg Gln Thr Gly Ser Ser Lys Ala  
 1 5 10 15

Leu Ala Gln Thr Leu Pro Pro Pro Thr Xaa Ala Gly Glu Ser Asn Ser  
 20 25 30

Val Thr Cys Asn Cys Gly Gln Glu Ala Val Leu Leu Thr Val Arg Lys  
 35 40 45

Glu Gly Pro Asn Arg Gly Arg Gln Phe Phe Lys Cys Asn Gly Gly Ser  
 50 55 60

Cys Asn Phe Phe Leu Trp Ala Asp Ser Pro Asn Pro Gly Ala Gly Gly  
 65 70 75 80

Pro Pro Ala Leu Ala Tyr Arg Pro Leu Gly Ala Ser Leu Gly Cys Pro  
 85 90 95

Pro Gly Pro Gly Ile His Leu Gly Gly Phe Gly Asn Pro Gly Asp Gly  
 100 105 110

Ser Gly Ser Gly Thr Ser Cys Leu Cys Ser Gln Pro Ser Val Thr Arg  
 115 120 125

Thr Val Gln Lys Asp Gly Pro Asn Lys Gly Arg Gln Phe His Thr Cys  
 130 135 140

Ala Lys Pro Arg Glu Gln Gln Cys Gly Phe Phe Gln Trp Val Asp Glu  
 145 150 155 160

## 5126

Asn Thr Ala Pro Gly Thr Ser Gly Ala Pro Ser Trp Thr Gly Asp Arg  
                   165                  170                  175

Gly Arg Thr Leu Glu Ser Glu Ala Arg Ser Lys Arg Pro Arg Ala Gly  
                   180                  185                  190

Ser Ser Asp Met Gly Ser Thr Ala Lys Lys Pro Arg Lys Cys Ser Xaa  
                   195                  200                  205

Cys His Gln Pro Gly Thr His Pro Ser Leu Leu Ser Ser Glu Gln Met  
                   210                  215                  220

Ser Ser Gly  
 225

<210> 5839

<211> 254

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (172)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5839

Gly Arg Ser Arg Val Ser Ser Arg Lys Arg His Pro Ala Gly Pro Pro  
   1                  5                  10                  15

Gly Glu Ala Gln Glu Gly Ser Ala Lys Ala Glu Arg Pro Gly Leu Gln  
                   20                  25                  30

Asn Met Glu Leu Ala Pro Val Gln Arg Lys Ile Glu Ala Arg Ser Ala  
                   35                  40                  45

Glu Asp Ser Phe Thr Gly Phe Val Arg Thr Leu Tyr Phe Ala Asp Thr  
                   50                  55                  60

Tyr Leu Lys Asp Ser Ser Arg His Cys Pro Ser Leu Trp Ala Gly Thr  
   65                  70                  75                  80

Asn Gly Gly Thr Ile Tyr Ala Phe Ser Leu Arg Val Pro Pro Ala Glu  
                   85                  90                  95

Arg Arg Met Asp Glu Pro Val Arg Ala Glu Gln Ala Lys Glu Ile Gln  
                   100                  105                  110

Leu Met His Arg Ala Pro Val Val Gly Ile Leu Val Leu Asp Gly His

## 5127

115                                      120                                      125  
 Ser Val Pro Leu Pro Glu Pro Leu Glu Val Ala His Asp Leu Ser Lys  
 130                                      135                                      140  
 Ser Pro Asp Met Gln Gly Ser His Gln Leu Leu Val Val Ser Glu Glu  
 145                                      150                                      155                                      160  
 Gln Phe Lys Val Phe Thr Leu Pro Lys Val Ser Xaa Lys Leu Lys Leu  
 165                                      170                                      175  
 Lys Leu Thr Ala Leu Glu Gly Ser Arg Val Arg Arg Val Ser Val Ala  
 180                                      185                                      190  
 His Phe Gly Ser Arg Arg Ala Glu Asp Tyr Gly Glu His His Leu Ala  
 195                                      200                                      205  
 Val Leu Thr Asn Leu Gly Asp Ile Gln Val Val Ser Leu Pro Leu Leu  
 210                                      215                                      220  
 Lys Pro Gln Val Arg Tyr Ser Cys Ile Arg Arg Glu Asp Val Met Ala  
 225                                      230                                      235                                      240  
 Ser Pro Pro Ala Ser Ser Pro Asn Met Ala Lys Ala Ser Thr  
 245                                      250

&lt;210&gt; 5840

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5840

Gln Pro Ile His Thr Arg Pro Gly Leu Phe Ile Tyr Thr Ala Ala His  
 1                                      5                                      10                                      15  
 Ser Ser Leu Gln Leu His Met Leu Tyr Leu Asp His Ser Glu Ala Asn  
 20                                      25                                      30  
 Ser Glu His Tyr Ile Ile Leu Ser Ile Asn Ile Ser Asn Ile Leu Lys  
 35                                      40                                      45  
 Tyr Thr Ile Gly Ile Gln Ala Ser Pro Ile Val Pro Gln Met Phe Gly  
 50                                      55                                      60  
 Cys Phe Cys Ser Trp Ile Val Cys Ile Arg Ile Gln Ala Arg Pro Ile  
 65                                      70                                      75                                      80  
 Tyr Cys Ile Tyr Leu Lys Cys Leu  
 85

## 5128

&lt;210&gt; 5841

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5841

Ser Phe Thr Gly Gln Ser Arg Thr Lys Ile Val Tyr Ser Met Tyr Ser  
 1 5 10 15

Arg Lys Ala Ala Glu Glu Val Lys Arg Glu Leu Ile Lys Leu Lys Val  
 20 25 30

Asn Tyr Tyr Ile Leu Glu Glu Ser Trp Cys Val Arg Arg Ser Lys Pro  
 35 40 45

Gly Cys Ser Met Pro Glu Ile Trp Asp Val Glu Asp Pro Ala Asn Ala  
 50 55 60

Gly Lys Thr Pro Leu Cys Asn Leu Leu Val Lys Asp Ser Lys Pro His  
 65 70 75 80

Phe Thr Thr Val Phe Gln Asn Ser Val Tyr Lys Val Leu Glu Val Val  
 85 90 95

Lys Glu

&lt;210&gt; 5842

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5842

Arg Ala Glu Phe Gly Thr Xaa Ser Leu Gln Ala Pro Ser Arg Glu Glu  
 1 5 10 15

Ala Ala Lys Trp Ser Gln Val Arg Lys Asp Leu Cys Ser Leu Lys Val  
 20 25 30

Ser Leu Gln Leu Arg Gly Glu Asp Gly Ser Val Trp Asn Tyr Lys Pro  
 35 40 45

## 5129

Pro Ala Asp Ser Gly Gly Lys Glu Ile Phe Ser Leu Leu Pro His Met  
 50 55 60

Ala Asp Met Ser Thr Tyr Met Phe Lys Gly Ile Ile Ser Phe Ala Lys  
 65 70 75 80

Val Ile Ser Tyr Phe Arg Asp Leu Pro Ile Glu Asp Gln Ile Ser Cys  
 85 90 95

<210> 5843

<211> 158

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5843

Val Thr Ala Xaa Ser Gly Ile Leu Asp Val Thr Val Val Tyr Leu Asn  
 1 5 10 15

Pro Glu Gln His Cys Cys Gln Glu Ser Ser Asp Glu Glu Ala Cys Pro  
 20 25 30

Glu Asp Lys Gly Pro Gln Asp Pro Gln Ala Leu Ala Leu Asp Thr Gln  
 35 40 45

Ile Pro Ala Thr Pro Gly Pro Lys Pro Leu Val Arg Thr Ser Arg Glu  
 50 55 60

Pro Gly Lys Asp Val Thr Thr Ser Gly Tyr Ser Ser Val Ser Thr Ala  
 65 70 75 80

Ser Pro Thr Ser Ser Val Asp Gly Gly Leu Gly Ala Leu Pro Gln Pro  
 85 90 95

Thr Ser Val Leu Ser Leu Asp Ser Asp Ser His Thr Gln Pro Cys His  
 100 105 110

His Gln Ala Arg Lys Ser Cys Leu Gln Cys Arg Pro Pro Ser Pro Pro  
 115 120 125

Glu Ser Ser Val Pro Gln Gln Gln Val Lys Arg Ile Asn Leu Cys Ile

## 5130

130

135

140

His Ser Glu Glu Glu Asp Met Asn Leu Gly Leu Val Arg Leu  
 145 150 155

&lt;210&gt; 5844

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (64)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5844

Gly Cys Leu Asn Asp Glu His Leu Glu Glu Leu Gly Gly Ile Leu Lys  
 1 5 10 15

Ala Lys Leu Glu Gly His Phe Lys Asn Gln Glu Leu Arg Gln Val Lys  
 20 25 30

Arg Gln Glu Glu Asn Tyr Asp Gln Gln Val Glu Met Ser Leu Xaa Asp  
 35 40 45

Glu Asp Glu Cys Asp Val Tyr Ile Leu Thr Lys Val Ser Asp Ile Xaa  
 50 55 60

His Ser Leu Phe Lys Tyr Leu  
 65 70

&lt;210&gt; 5845

&lt;211&gt; 137

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5845

Arg Gly Gln His Gln Leu Glu Gly Gly Leu Gly Gly Phe Gln Gly Leu  
 1 5 10 15

His Gln Val Arg Arg Pro Cys Pro Glu Asp Trp Leu Leu Tyr Gly Arg  
 20 25 30

## 5131

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Tyr | Phe | Phe | Ser | Glu | Glu | Pro | Arg | Asp | Trp | Asn | Thr | Gly | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Tyr | Cys | His | Thr | His | Glu | Ala | Val | Leu | Ala | Val | Ile | Gln | Ser | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Lys | Glu | Leu | Glu | Phe | Met | Phe | Lys | Phe | Thr | Arg | Arg | Glu | Pro | Trp | Ile |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Gly | Leu | Arg | Arg | Val | Gly | Asp | Glu | Phe | His | Trp | Val | Asn | Gly | Asp | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Asp | Pro | Asp | Thr | Phe | Thr | Ile | Ala | Gly | Pro | Gly | Glu | Cys | Val | Phe |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Glu | Pro | Thr | Arg | Leu | Val | Ser | Thr | Glu | Cys | Leu | Met | Thr | Arg | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Trp | Val | Cys | Ser | Lys | Met | Ala | Tyr | Thr |     |     |     |     |     |     |     |
| 130 |     |     |     |     |     | 135 |     |     |     |     |     |     |     |     |     |

<210> 5846

<211> 130

&lt;212&gt; PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

$\langle 222 \rangle$  (121)

<223> Xaa equals any of the naturally occurring L-amino acids

 $\langle 220 \rangle$ 

&lt;221&gt; SITE

 $\langle 222 \rangle$  (130)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5846

Gly Ala Arg Pro Gly Ala Glu Gly Ala Arg Ala Phe Gly Gly Ser Ile  
1 5 10 15

Gly Leu Gln Ala Glu Glu Gln Gly Pro Cys His Leu Pro Gly Gly Arg  
20 25 30

Ser His Leu Cys Ser Gln Val Arg Gly Ser Ser Gly Gly Glu Thr Glu

Cys Ala Ser Trp Glu Ala Pro Arg Ile Val Gly Gly Glu Leu Ala Ala  
50 55 60



## 5132

Ser Leu Ala Cys Pro Leu Phe Pro Val Pro Pro Ser Arg Leu Ala Pro  
 65 70 75 80  
 Ala Pro Ala Trp Glu Asp Pro His Leu Arg Leu Gln Cys Leu Phe Pro  
 85 90 95  
 Leu Glu Ala Leu Pro Ser Ala Arg Gly Pro Arg Ile Leu Pro Trp Pro  
 100 105 110  
 Ser Glu His Arg Leu Gly Arg Pro Xaa Asn Ser Ser Val Lys Pro Gly  
 115 120 125  
 Ile Xaa  
 130

&lt;210&gt; 5847

&lt;211&gt; 140

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (100)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (129)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5847

Glu Phe Gly Arg Gly Glu Ile Ser Arg Gly Pro Asp Val His Leu Thr  
 1 5 10 15

His Gly Leu Glu Pro Lys Asp Val Asn Arg Glu Phe Arg Leu Thr Glu  
 20 25 30

Ser Ser Thr Cys Glu Pro Ser Thr Val Ala Ala Val Leu Ser Arg Ala  
 35 40 45

Gln Gly Cys Arg Ser Pro Ser Ala Pro Asp Val Arg Thr Gly Ser Phe  
 50 55 60

Ser His Ser Ala Thr Asp Gly Ser Val Gly Leu Ile Gly Val Pro Glu  
 65 70 75 80

Lys Lys Val Ala Glu Lys Gln Ala Ser Thr Glu Leu Glu Ala Ala Ser  
 85 90 95

## 5133

Phe Pro Ala Xaa Met Tyr Ser Glu Pro Leu Arg Gln Phe Arg Asp Ser  
 100 105 110

Ser Val Gly Asp Gln Asn Ala Gln Val Cys Gln Thr Asn Ser Arg Thr  
 115 120 125

Xaa Cys Asn Asn Ser Gly Asp His Thr Pro Trp Ile  
 130 135 140

<210> 5848

<211> 194

<212> PRT

<213> Homo sapiens

<400> 5848

Leu Leu Ser Asn Lys Met Asn Phe Val Leu Val Lys Val Arg Tyr Asp  
 1 5 10 15

Val Val Gly Met Phe Trp Asn Met Phe Phe Gln Val Ala Ser Gly Gly  
 20 25 30

Gly Gly Val Gly Asp Gly Val Gln Glu Pro Thr Thr Gly Asn Trp Arg  
 35 40 45

Gly Met Leu Lys Thr Ser Lys Ala Glu Glu Leu Leu Ala Glu Glu Lys  
 50 55 60

Ser Lys Pro Ile Pro Ile Met Pro Ala Ser Pro Gln Lys Gly His Ala  
 65 70 75 80

Val Asn Leu Leu Asp Val Pro Val Pro Val Ala Arg Lys Leu Ser Ala  
 85 90 95

Arg Glu Gln Arg Asp Cys Glu Val Ile Glu Arg Leu Ile Lys Ser Tyr  
 100 105 110

Phe Leu Ile Val Arg Lys Asn Ile Gln Asp Ser Val Pro Lys Ala Val  
 115 120 125

Met His Phe Leu Val Asn His Val Lys Asp Thr Leu Gln Ser Glu Leu  
 130 135 140

Val Gly Gln Leu Tyr Lys Ser Ser Leu Leu Asp Asp Leu Leu Thr Glu  
 145 150 155 160

Ser Glu Asp Met Ala Gln Arg Arg Lys Glu Ala Ala Asp Met Leu Lys  
 165 170 175

## 5134

Ala Leu Gln Gly Ala Ser Gln Ile Ile Ala Glu Ile Arg Glu Thr His  
180 185 190

Leu Trp

<210> 5849

<211> 75

<212> PRT

<213> Homo sapiens

<400> 5849

Leu Phe Lys Val Ser Asn Val His Pro Gly Leu Gly Ile Thr Asn Val  
1 5 10 15

Gly Val Lys Met Pro Thr Lys Gly Phe Ser Ala Leu Glu Val Leu Arg  
20 25 30

Ser Pro Ile Cys Ile Lys Ala Asp Pro Phe Cys Lys Asp Leu Ser Phe  
35 40 45

Arg Thr Phe Ser Val Leu Leu Val Arg Thr Leu Glu Val Ile Leu Ile  
50 55 60

Ile Ser Thr Asp Ser Leu Thr Ala Glu Ala Thr  
65 70 75

<210> 5850

<211> 241

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (199)

<223> Xaa equals any of the naturally occurring L-amino acids

## 5135

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (226)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (229)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (230)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (231)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5850

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Xaa | Phe | Xaa | Asn | Ala | Gly | Val | Lys | Gln | Ser | Ala | Leu | Leu | Gly | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asp | Leu | Leu | Ser | Gln | Tyr | Pro | Phe | Ile | Ile | Asp | Ala | His | Leu | Ser |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ile | Leu | Ser | Glu | Val | Thr | Ala | Val | Phe | Thr | Asp | Lys | Asp | Ala | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Arg | Leu | Ala | Ala | Val | Gln | Leu | Leu | Gln | Phe | Leu | Ala | Pro | Lys | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Glu | Gln | Ile | Ser | Pro | Phe | Phe | Pro | Leu | Val | Ser | Ala | His | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Ala | Met | Thr | His | Ile | Thr | Glu | Gly | Ile | Gln | Glu | Asp | Ser | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Val | Leu | Asp | Ile | Leu | Leu | Glu | Gln | Tyr | Pro | Ala | Leu | Ile | Thr | Gly |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Ser | Ile | Leu | Leu | Lys | Asn | Phe | Val | Glu | Leu | Ile | Ser | His | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Ser | Lys | Gly | Leu | Ile | Asn | Arg | Asp | Arg | Ser | Gln | Ser | Trp | Ile |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Val | Asn | Pro | Asn | Arg | Arg | Leu | Thr | Ser | Gln | Gln | Trp | Arg | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

## 5136

Lys Val Leu Val Arg Leu Ser Lys Phe Leu Gln Ala Leu Ala Asp Gly  
                           165                          170                          175  
 Ser Ser Arg Leu Arg Glu Ser Glu Gly Leu Gln Glu Gln Lys Glu Asn  
                           180                          185                          190  
 Pro His Ala Thr Ser Asn Xaa Ile Phe Ile Asn Trp Lys Glu His Ala  
                           195                          200                          205  
 Asn Asp Gln Gln His Ile Gln Gly Tyr Glu Asn Gly Gly Ser Gln Ala  
                           210                          215                          220  
 Lys Xaa Gly Pro Xaa Xaa Xaa Thr Asp Leu Val Gly Gly Leu Met Gly  
                           225                          230                          235                          240

Gly

<210> 5851  
 <211> 260  
 <212> PRT  
 <213> Homo sapiens

<400> 5851  
 Asn Ser Arg Thr Asp Val Arg Met Glu Thr Asp Leu Glu Val Ile Ile  
   1                          5                          10                          15  
 Lys Asp Asn Ser Leu Val Leu Thr Pro Ser His Ile Lys Ala Tyr Met  
                           20                          25                          30  
 Leu Met Thr Leu Gln Gly Leu Glu Tyr Leu His Gln His Trp Ile Leu  
                           35                          40                          45  
 His Arg Asp Leu Lys Pro Asn Asn Leu Leu Leu Asp Glu Asn Gly Val  
                           50                          55                          60  
 Leu Lys Leu Ala Asp Phe Gly Leu Ala Lys Ser Phe Gly Ser Pro Asn  
   65                          70                          75                          80  
 Arg Ala Tyr Thr His Gln Val Val Thr Arg Trp Tyr Arg Ala Pro Glu  
                           85                          90                          95  
 Leu Leu Phe Gly Ala Arg Met Tyr Gly Val Gly Val Asp Met Trp Ala  
                           100                          105                          110  
 Val Gly Cys Ile Leu Ala Glu Leu Leu Leu Arg Val Pro Phe Leu Pro  
                           115                          120                          125  
 Gly Asp Ser Asp Leu Asp Gln Leu Thr Arg Ile Phe Glu Thr Leu Gly

## 5137

|   |     |             |
|---|-----|-------------|
| 130   | 135 | 140         |
| Thr Pro Thr Glu Glu Gln Trp Pro Asp Met Cys Ser Leu Pro Asp Tyr |     |             |
| 145   | 150 | 155 160     |
| Val Thr Phe Lys Ser Phe Pro Gly Ile Pro Leu His His Ile Phe Ser |     |             |
|   | 165 | 170 175     |
| Ala Ala Gly Asp Asp Leu Leu Asp Leu Ile Gln Gly Leu Phe Leu Phe |     |             |
|   | 180 | 185 190     |
| Asn Pro Cys Ala Arg Ile Thr Ala Thr Gln Ala Leu Lys Met Lys Tyr |     |             |
|   | 195 | 200 205     |
| Phe Ser Asn Arg Pro Gly Pro Thr Pro Gly Cys Gln Leu Pro Arg Pro |     |             |
|   | 210 | 215 220     |
| Asn Cys Pro Val Glu Thr Leu Lys Glu Gln Ser Asn Pro Ala Leu Ala |     |             |
|   | 225 | 230 235 240 |
| Ile Lys Arg Lys Arg Thr Glu Ala Leu Glu Gln Gly Gly Leu Pro Lys |     |             |
|   | 245 | 250 255     |
| Lys Leu Ile Phe   |     |             |
|   | 260 |             |

&lt;210&gt; 5852

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5852

|   |    |          |
|---|----|----------|
| Ser Ser Tyr Arg Ser Lys Ala Tyr Thr His Thr Lys Ile Thr Val Pro |    |          |
| 1   | 5  | 10 15    |
| Arg Glu Arg Val Cys Val Ser Val Arg Val Ser Val Cys Ala Arg Ala |    |          |
|   | 20 | 25 30    |
| Arg Ser Trp Pro Asn Val Arg Thr Leu His Lys Gly Gly Arg Ser Ser |    |          |
|   | 35 | 40 45    |
| Tyr Arg Leu Phe Asn Val Arg Glu Thr Ile Phe Leu Leu Phe Gln Leu |    |          |
|   | 50 | 55 60    |
| Tyr Gln Ile Leu Val Pro Gln His Arg Asn Asp Ser Glu Ser Gln Thr |    |          |
|   | 65 | 70 75 80 |
| Lys Cys Ile Ile Cys Ser Ile Leu Ile Leu Leu His Ser             |    |          |
|   | 85 | 90       |

5138

&lt;210&gt; 5853

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5853

Cys Cys Leu Cys Gly Leu Trp Val Trp Thr Asn Pro Val Val Ala Cys  
1 5 10 15

Pro Pro Glu Pro Pro Pro Ser Gln Gln Arg His Gln Gly Ala Leu Gly  
20 25 30

Ser Pro Lys Thr Tyr His Ser Arg Val Pro Gln Ala Pro Gly Cys Cys  
35 40 45

Phe Leu Leu Pro Val Pro Gln Pro His Ala Pro Phe Tyr Ile Leu Cys  
50 55 60

Val Ser Lys Gly Trp Lys Asn Lys Thr Gln Leu Lys Ile Lys Lys Lys  
65 70 75 80

Lys Lys Lys Lys Lys Lys Lys Lys Lys  
85

&lt;210&gt; 5854

&lt;211&gt; 544

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (266)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (320)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (321)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 5139

&lt;222&gt; (527)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (528)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (529)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5854

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Trp | Pro | Val | Val | Ala | Asn | Gln | Val | Leu | Lys | Leu | Gly | Asn | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Phe | Lys | Pro | Glu | Ser | Arg | Val | Asn | Gly | Leu | Asp | Glu | Ser | Lys | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asp | Lys | Asn | Glu | Leu | Lys | Glu | Ile | Cys | Glu | Leu | Thr | Gly | Ile | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ser | Val | Leu | Glu | Arg | Ala | Phe | Ser | Phe | Arg | Thr | Val | Glu | Ala | Lys |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Glu | Lys | Val | Ser | Thr | Thr | Leu | Asn | Val | Ala | Gln | Ala | Tyr | Tyr | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asp | Ala | Leu | Ala | Lys | Asn | Leu | Tyr | Ser | Arg | Leu | Phe | Ser | Trp | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asn | Arg | Ile | Asn | Glu | Ser | Ile | Lys | Ala | Gln | Thr | Lys | Val | Arg | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Val | Met | Gly | Val | Leu | Asp | Ile | Tyr | Gly | Phe | Glu | Ile | Phe | Glu | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ser | Phe | Glu | Gln | Phe | Ile | Ile | Asn | Tyr | Cys | Asn | Glu | Lys | Leu | Gln |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ile | Phe | Ile | Glu | Leu | Thr | Leu | Lys | Glu | Glu | Gln | Glu | Glu | Tyr | Ile |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Glu | Asp | Ile | Glu | Trp | Thr | His | Ile | Asp | Tyr | Phe | Asn | Asn | Ala | Ile |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Cys | Asp | Leu | Ile | Glu | Asn | Asn | Thr | Asn | Gly | Ile | Leu | Ala | Met | Leu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Glu | Glu | Cys | Leu | Arg | Pro | Gly | Thr | Val | Thr | Asp | Glu | Thr | Phe | Leu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 5140

|   |     |         |
|---|-----|---------|
| 195   | 200 | 205     |
| Glu Lys Leu Asn Gln Val Cys Ala Thr His Gln His Phe Glu Ser Arg |     |         |
| 210   | 215 | 220     |
| Met Ser Lys Cys Ser Arg Phe Leu Asn Asp Thr Ser Leu Pro His Ser |     |         |
| 225   | 230 | 235 240 |
| Cys Phe Arg Ile Gln His Tyr Ala Gly Lys Val Leu Tyr Gln Val Glu |     |         |
|   | 245 | 250 255 |
| Gly Phe Val Asp Lys Asn Asn Asp Leu Xaa Tyr Arg Asp Leu Ser Gln |     |         |
|   | 260 | 265 270 |
| Ala Met Trp Lys Ala Ser His Ala Leu Ile Lys Ser Leu Phe Pro Glu |     |         |
|   | 275 | 280 285 |
| Gly Asn Pro Ala Lys Ile Asn Leu Lys Arg Pro Pro Thr Ala Gly Ser |     |         |
|   | 290 | 295 300 |
| Gln Phe Lys Ala Ser Val Ala Thr Leu Met Lys Asn Leu Gln Thr Xaa |     |         |
| 305   | 310 | 315 320 |
| Xaa Pro Asn Tyr Ile Arg Cys Ile Lys Pro Asn Asp Lys Lys Ala Ala |     |         |
|   | 325 | 330 335 |
| His Ile Phe Asn Glu Ala Leu Val Cys His Gln Ile Arg Tyr Leu Gly |     |         |
|   | 340 | 345 350 |
| Leu Leu Glu Asn Val Arg Val Arg Arg Ala Gly Tyr Ala Phe Arg Gln |     |         |
|   | 355 | 360 365 |
| Ala Tyr Glu Pro Cys Leu Glu Arg Tyr Lys Met Leu Cys Lys Gln Thr |     |         |
|   | 370 | 375 380 |
| Trp Pro His Trp Lys Gly Pro Ala Arg Ser Gly Val Glu Val Leu Phe |     |         |
| 385   | 390 | 395 400 |
| Asn Glu Leu Glu Ile Pro Val Glu Glu Tyr Ser Phe Gly Arg Ser Lys |     |         |
|   | 405 | 410 415 |
| Ile Phe Ile Arg Asn Pro Arg Thr Leu Phe Lys Leu Glu Asp Leu Arg |     |         |
|   | 420 | 425 430 |
| Lys Gln Arg Leu Glu Asp Leu Ala Thr Leu Ile Gln Lys Ile Tyr Arg |     |         |
|   | 435 | 440 445 |
| Gly Trp Lys Cys Arg Thr His Phe Leu Leu Met Lys Lys Ser Gln Ile |     |         |
|   | 450 | 455 460 |
| Val Ile Ala Ala Trp Tyr Arg Arg Tyr Ala Gln Gln Lys Arg Tyr Gln |     |         |

## 5141

465                      470                      475                      480  
 Gln Thr Lys Ser Ser Ala Leu Val Ile Gln Ser Tyr Ile Arg Gly Trp  
                                  485                      490                      495  
 Lys Ala Arg Lys Ile Leu Arg Glu Leu Lys His Gln Lys Arg Cys Lys  
                                  500                      505                      510  
 Glu Ala Val Thr Thr Ile Ala Ala Tyr Trp His Gly Thr Gln Xaa Xaa  
                                  515                      520                      525  
 Xaa Lys Asn Gln Glu Ile Leu Gln Ser Gln Cys Trp Lys Arg Lys Ser  
                                  530                      535                      540

<210> 5855  
 <211> 87  
 <212> PRT  
 <213> Homo sapiens

<400> 5855  
 Leu Cys Leu Leu Lys Arg Pro Ser Pro Ile Leu Phe Asn Pro Gly Ser  
   1                                  5                                  10                                  15  
 Pro Ser Gly Gly Pro Thr Leu Gly Thr Thr Ser Pro Thr Asp Gly Pro  
                                   20                                  25                                  30  
 Leu Ala Ser Ala Ile Leu Leu Ala Ala Ile Ser Trp Ala Lys Met Leu  
                                   35                                  40                                  45  
 Leu Leu Pro Asp Val Ala Asp Phe Pro Cys Gly Ala Lys Arg Lys Pro  
   50                                  55                                  60  
 Arg Leu Leu Met Leu Ile Ile Pro Leu Ser Ser Gln Pro Leu Tyr Ile  
   65                                  70                                  75                                  80  
 Lys Ala Ser Gly Thr Lys Arg  
                                   85

<210> 5856  
 <211> 600  
 <212> PRT  
 <213> Homo sapiens

<220>

## 5142

<221> SITE  
 <222> (45)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (48)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (52)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (81)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (120)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (137)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (167)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (270)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5856  
 Arg Thr Arg Gly Lys Gln Ala Ala Asn Asn Ser Leu Leu Leu His Leu  
 1 5 10 15  
 Leu Lys Ser Gln Thr Ile Pro Lys Pro Met Asn Gly His Ser His Ser  
 20 25 30  
 Glu Arg Gly Ser Ile Phe Glu Glu Ser Ser Thr Pro Xaa Thr Ile Xaa  
 35 40 45  
 Glu Tyr Ser Xaa Asn Asn Pro Ser Phe Thr Asp Asp Ser Ser Gly Asp  
 50 55 60

## 5143

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Ser | Tyr | Ser | Asn | Cys | Val | Pro | Ile | Asp | Leu | Ser | Cys | Lys | His | 65  | 70  | 75  | 80  |
| Xaa | Thr | Glu | Lys | Ser | Glu | Ser | Asp | Gln | Pro | Val | Ser | Leu | Asp | Asn | Phe | 85  | 90  | 95  |     |
| Thr | Gln | Ser | Leu | Leu | Asn | Thr | Trp | Asp | Pro | Lys | Val | Pro | Asp | Val | Asp | 100 | 105 | 110 |     |
| Ile | Lys | Glu | Asp | Gln | Asp | Thr | Xaa | Lys | Asn | Ser | Lys | Leu | Asn | Ser | His | 115 | 120 | 125 |     |
| Gln | Lys | Val | Thr | Leu | Leu | Gln | Leu | Xaa | Leu | Gly | His | Lys | Asn | Glu | Glu | 130 | 135 | 140 |     |
| Asn | Val | Glu | Lys | Asn | Thr | Ser | Pro | Gln | Gly | Val | His | Asn | Asp | Val | Ser | 145 | 150 | 155 | 160 |
| Lys | Phe | Asn | Thr | Gln | Asn | Xaa | Ala | Arg | Thr | Ser | Val | Ile | Glu | Ser | Pro | 165 | 170 | 175 |     |
| Ser | Thr | Asn | Arg | Thr | Thr | Pro | Val | Ser | Thr | Pro | Pro | Leu | Leu | Thr | Ser | 180 | 185 | 190 |     |
| Ser | Lys | Ala | Gly | Ser | Pro | Ile | Asn | Leu | Ser | Gln | His | Ser | Leu | Val | Ile | 195 | 200 | 205 |     |
| Lys | Trp | Asn | Ser | Pro | Pro | Tyr | Val | Cys | Ser | Thr | Gln | Ser | Glu | Lys | Leu | 210 | 215 | 220 |     |
| Thr | Asn | Thr | Ala | Ser | Asn | His | Ser | Met | Asp | Leu | Thr | Lys | Ser | Lys | Asp | 225 | 230 | 235 | 240 |
| Pro | Pro | Gly | Glu | Lys | Pro | Ala | Gln | Asn | Glu | Gly | Ala | Gln | Asn | Ser | Ala | 245 | 250 | 255 |     |
| Thr | Phe | Ser | Ala | Ser | Lys | Leu | Leu | Gln | Asn | Leu | Ala | Gln | Xaa | Gly | Met | 260 | 265 | 270 |     |
| Gln | Ser | Ser | Met | Ser | Val | Glu | Glu | Gln | Arg | Pro | Ser | Lys | Gln | Leu | Leu | 275 | 280 | 285 |     |
| Thr | Gly | Asn | Thr | Asp | Lys | Pro | Ile | Gly | Met | Ile | Asp | Arg | Leu | Asn | Ser | 290 | 295 | 300 |     |
| Pro | Leu | Leu | Ser | Asn | Lys | Thr | Asn | Ala | Val | Glu | Glu | Asn | Lys | Ala | Phe | 305 | 310 | 315 | 320 |
| Ser | Ser | Gln | Pro | Thr | Gly | Pro | Glu | Pro | Gly | Leu | Ser | Gly | Ser | Glu | Ile | 325 | 330 | 335 |     |

## 5144

Glu Asn Leu Leu Glu Arg Arg Thr Val Leu Gln Leu Leu Leu Gly Asn  
 340 345 350

Pro Asn Lys Gly Lys Ser Glu Lys Lys Glu Lys Thr Pro Leu Arg Asp  
 355 360 365

Glu Ser Thr Gln Glu His Ser Glu Arg Ala Leu Ser Glu Gln Ile Leu  
 370 375 380

Met Val Lys Ile Lys Ser Glu Pro Cys Asp Asp Leu Gln Ile Pro Asn  
 385 390 395 400

Thr Asn Val His Leu Ser His Asp Ala Lys Ser Ala Pro Phe Leu Gly  
 405 410 415

Met Ala Pro Ala Val Gln Arg Ser Ala Pro Ala Leu Pro Val Ser Glu  
 420 425 430

Asp Phe Lys Ser Glu Pro Val Ser Pro Gln Asp Phe Ser Phe Ser Lys  
 435 440 445

Asn Gly Leu Leu Ser Arg Leu Leu Arg Gln Asn Gln Asp Ser Tyr Leu  
 450 455 460

Ala Asp Asp Ser Asp Arg Ser His Arg Asn Asn Glu Met Ala Leu Leu  
 465 470 475 480

Glu Ser Lys Asn Leu Cys Met Val Pro Lys Lys Arg Lys Leu Tyr Thr  
 485 490 495

Glu Pro Leu Glu Asn Pro Phe Lys Lys Met Lys Asn Asn Ile Val Asp  
 500 505 510

Ala Ala Asn Asn His Ser Ala Pro Glu Val Leu Tyr Gly Ser Leu Leu  
 515 520 525

Asn Gln Glu Glu Leu Lys Phe Ser Arg Asn Asp Leu Glu Phe Lys Tyr  
 530 535 540

Pro Ala Gly His Gly Ser Ala Ser Glu Ser Glu His Arg Ser Trp Ala  
 545 550 555 560

Arg Glu Ser Lys Ser Phe Asn Val Leu Lys Gln Leu Leu Leu Ser Glu  
 565 570 575

Asn Cys Val Arg Asp Leu Ser Pro His Arg Ser Asn Ser Val Ala Asp  
 580 585 590

Ser Lys Lys Glu Arg Thr Gln Lys  
 595 600

## 5145

&lt;210&gt; 5857

&lt;211&gt; 308

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5857

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Tyr | Gly | Arg | Ile | Pro | Gly | Ser | Thr | His | Ala | Ser | Ala | Glu | Pro | Leu | 1   | 5   | 10  | 15  |
| Glu | Asn | Pro | Phe | Lys | Lys | Met | Lys | Asn | Asn | Ile | Val | Asp | Ala | Ala | Asn | 20  | 25  | 30  |     |
| Asn | His | Ser | Ala | Pro | Glu | Val | Leu | Tyr | Gly | Ser | Leu | Leu | Asn | Gln | Glu | 35  | 40  | 45  |     |
| Glu | Leu | Lys | Phe | Ser | Arg | Asn | Asp | Leu | Glu | Phe | Lys | Tyr | Pro | Ala | Gly | 50  | 55  | 60  |     |
| His | Gly | Ser | Ala | Ser | Glu | Ser | Glu | His | Arg | Ser | Trp | Ala | Arg | Glu | Ser | 65  | 70  | 75  | 80  |
| Lys | Ser | Phe | Asn | Val | Leu | Lys | Gln | Leu | Leu | Leu | Ser | Glu | Asn | Cys | Val | 85  | 90  | 95  |     |
| Arg | Asp | Leu | Ser | Pro | His | Arg | Ser | Asn | Ser | Val | Ala | Asp | Ser | Lys | Lys | 100 | 105 | 110 |     |
| Lys | Gly | His | Lys | Asn | Asn | Val | Thr | Asn | Ser | Lys | Pro | Glu | Phe | Ser | Ile | 115 | 120 | 125 |     |
| Ser | Ser | Leu | Asn | Gly | Leu | Met | Tyr | Ser | Ser | Thr | Gln | Pro | Ser | Ser | Cys | 130 | 135 | 140 |     |
| Met | Asp | Asn | Arg | Thr | Phe | Ser | Tyr | Pro | Gly | Val | Val | Lys | Thr | Pro | Val | 145 | 150 | 155 | 160 |
| Ser | Pro | Thr | Phe | Pro | Glu | His | Leu | Gly | Cys | Ala | Gly | Ser | Arg | Pro | Glu | 165 | 170 | 175 |     |
| Ser | Gly | Leu | Leu | Asn | Gly | Cys | Ser | Met | Pro | Ser | Glu | Lys | Gly | Pro | Ile | 180 | 185 | 190 |     |
| Lys | Trp | Val | Ile | Thr | Asp | Ala | Glu | Lys | Asn | Glu | Tyr | Glu | Lys | Asp | Ser | 195 | 200 | 205 |     |
| Pro | Arg | Leu | Thr | Lys | Thr | Asn | Pro | Ile | Leu | Tyr | Tyr | Met | Leu | Gln | Lys | 210 | 215 | 220 |     |

[illegible]

<213> Homo sapiens

<223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5858

## 5147

Thr Leu Glu Ala Glu Lys Glu Arg Arg Lys Ser Gly Leu Ser Ser Arg  
 1 5 10 15  
 Val Gln Phe Arg Asn Gln Gly Ser Glu Pro Lys Tyr Thr Gln Glu Leu  
 20 25 30  
 Thr Leu Lys Arg Gln Lys Gln Lys Val Cys Met Glu Glu Thr Leu Trp  
 35 40 45  
 Leu Gln Asp Asn Ile Arg Asp Lys Leu Arg Pro Ile Pro Ile Thr Ala  
 50 55 60  
 Ser Val Glu Ile Gln Glu Pro Ser Ser Arg Arg Arg Val Asn Ser Leu  
 65 70 75 80  
 Pro Glu Val Leu Pro Ile Leu Asn Ser Asp Glu Pro Lys Thr Ala His  
 85 90 95  
 Ile Asp Val His Phe Leu Lys Glu Gly Cys Gly Asp Asp Asn Val Cys  
 100 105 110  
 Asn Ser Asn Leu Lys Leu Glu Tyr Lys Phe Cys Thr Arg Glu Gly Asn  
 115 120 125  
 Xaa Asp Lys Phe Xaa Tyr Leu Pro Ile Gln Lys Gly Val Pro Glu Leu  
 130 135 140  
 Val Leu Lys Asp Gln Lys Asp Ile Ala Leu Glu Ile Thr Val Thr Asn  
 145 150 155 160  
 Ser Pro Ser Asn Pro Arg Asn Pro Thr Lys Asp Gly Asp Asp Ala His  
 165 170 175  
 Glu Ala Lys Leu Ile Ala Thr Phe Pro Asp Thr Leu Thr Tyr Ser Ala  
 180 185 190  
 Tyr Arg Glu Leu Arg Ala Phe Pro Glu Lys Gln Leu Ser Cys Val Ala  
 195 200 205  
 Asn Gln Asn Gly Ser Gln Ala Asp Cys Glu Leu Gly Asn Pro Phe Lys  
 210 215 220  
 Arg Asn Ser Asn Val Thr Phe Tyr Leu Val Leu Ser Thr Thr Glu Val  
 225 230 235 240  
 Thr Phe Asp Thr Pro Asp Leu Asp Ile Asn Leu Lys Leu Glu Thr Thr  
 245 250 255  
 Ser Asn Gln Asp Asn Leu Ala Pro Ile Thr Ala Lys Ala Lys Val Val  
 260 265 270



## 5148

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Glu | Leu | Leu | Leu | Ser | Val | Ser | Gly | Val | Ala | Lys | Pro | Ser | Gln | Val | 275 | 280 | 285 |     |
| Tyr | Phe | Gly | Gly | Thr | Val | Val | Gly | Glu | Gln | Ala | Met | Lys | Ser | Glu | Asp | 290 | 295 | 300 |     |
| Glu | Val | Gly | Ser | Leu | Ile | Glu | Tyr | Glu | Phe | Arg | Val | Ile | Asn | Leu | Gly | 305 | 310 | 315 | 320 |
| Lys | Pro | Leu | Thr | Asn | Leu | Gly | Thr | Ala | Thr | Leu | Asn | Ile | Gln | Trp | Pro | 325 | 330 | 335 |     |
| Lys | Glu | Ile | Ser | Asn | Gly | Lys | Trp | Leu | Leu | Tyr | Leu | Val | Lys | Val | Glu | 340 | 345 | 350 |     |
| Ser | Lys | Gly | Leu | Glu | Lys | Val | Thr | Cys | Glu | Pro | Gln | Lys | Glu | Ile | Asn | 355 | 360 | 365 |     |
| Ser | Leu | Asn | Leu | Thr | Glu | Xaa | His | Asn | Ser | Arg | Lys | Lys | Arg | Glu | Ile | 370 | 375 | 380 |     |
| Thr | Glu | Lys | Gln | Ile | Asp | Asp | Asn | Arg | Lys | Phe | Ser | Leu | Phe | Ala | Glu | 385 | 390 | 395 | 400 |
| Arg | Lys | Tyr | Gln | Thr | Leu | Asn | Cys | Ser | Val | Asn | Val | Asn | Cys | Val | Asn | 405 | 410 | 415 |     |
| Ile | Arg | Cys | Pro | Leu | Arg | Gly | Leu | Asp | Ser | Lys | Ala | Ser | Leu | Ile | Leu | 420 | 425 | 430 |     |
| Arg | Ser | Arg | Leu | Trp | Xaa | Ser | Thr | Phe | Leu | Glu | Glu | Tyr | Ser | Lys | Leu | 435 | 440 | 445 |     |
| Asn | Tyr | Leu | Asp | Ile | Leu | Met | Arg | Ala | Phe | Ile | Asp | Val | Thr | Ala | Ala | 450 | 455 | 460 |     |
| Ala | Glu | Asn | Ile | Arg | Leu | Pro | Asn | Ala | Gly | Thr | Gln | Val | Arg | Val | Thr | 465 | 470 | 475 | 480 |
| Val | Phe | Pro | Ser | Lys | Thr | Val | Ala | Gln | Tyr | Ser | Gly | Val | Pro | Trp | Trp | 485 | 490 | 495 |     |
| Ile | Ile | Leu | Val | Ala | Ile | Leu | Ala | Gly | Ile | Leu | Met | Leu | Ala | Leu | Leu | 500 | 505 | 510 |     |
| Val | Phe | Ile | Leu | Trp | Lys | Cys | Gly | Phe | Phe | Lys | Arg | Asn | Lys | Lys | Asp | 515 | 520 | 525 |     |
| His | Tyr | Asp | Ala | Thr | Tyr | His | Lys | Ala | Glu | Ile | His | Ala | Gln | Pro | Ser | 530 | 535 | 540 |     |

## 5149

Asp Lys Glu Arg Xaa Thr Ser Asp Ala  
545 550

<210> 5859

<211> 110

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (110)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5859

Arg Thr Pro Glu Ser Trp Arg Leu Thr Pro Pro Ala Lys Val Gly Gly  
1 5 10 15

Leu Asp Phe Ser Pro Val Gln Thr Ser Gln Gly Ala Ser Asp Pro Leu  
20 25 30

Pro Asp Pro Leu Gly Leu Met Asp Leu Ser Thr Thr Pro Leu Gln Ser  
35 40 45

Ala Pro Pro Leu Glu Ser Pro Gln Arg Leu Leu Ser Ser Glu Pro Leu  
50 55 60

Asp Leu Ile Ser Val Pro Phe Gly Asn Ser Ser Pro Ser Asp Ile Asp  
65 70 75 80

Val Pro Lys Pro Gly Ser Pro Glu Pro Gln Val Ser Gly Leu Ala Ala  
85 90 95

Asn Arg Ser Leu Thr Glu Gly Leu Val Leu Gly His Asn Xaa  
100 105 110

<210> 5860

<211> 198

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5860

Pro Xaa Arg Pro Arg Gly Ala Ala Ala Ala Ala Ala Ala Gly Ala

## 5150

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ala Met Pro Lys Gly Gly Arg Lys Gly Gly His Lys Gly Arg Ala Arg | 20  | 25  | 30  |
| Gln Tyr Thr Ser Pro Glu Glu Ile Asp Ala Gln Leu Gln Ala Glu Lys | 35  | 40  | 45  |
| Gln Lys Ala Arg Glu Glu Glu Glu Gln Lys Glu Gly Gly Asp Gly Ala | 50  | 55  | 60  |
| Ala Gly Asp Pro Lys Lys Glu Lys Lys Ser Leu Asp Ser Asp Glu Ser | 65  | 70  | 75  |
| Glu Asp Glu Glu Asp Asp Tyr Gln Gln Lys Arg Lys Gly Val Glu Gly | 85  | 90  | 95  |
| Leu Ile Asp Ile Glu Asn Pro Asn Arg Val Ala Gln Thr Thr Lys Lys | 100 | 105 | 110 |
| Val Thr Gln Leu Asp Leu Asp Gly Pro Lys Glu Leu Ser Arg Arg Glu | 115 | 120 | 125 |
| Arg Glu Glu Ile Glu Lys Gln Lys Ala Lys Glu Arg Tyr Met Lys Met | 130 | 135 | 140 |
| His Leu Ala Gly Lys Thr Glu Gln Ala Lys Ala Asp Leu Ala Arg Leu | 145 | 150 | 155 |
| Ala Ile Ile Arg Lys Gln Arg Glu Glu Ala Ala Arg Lys Lys Glu Glu | 165 | 170 | 175 |
| Glu Arg Lys Ala Lys Asp Asp Ala Thr Leu Ser Gly Lys Arg Met Gln | 180 | 185 | 190 |
| Ser Leu Ser Leu Asn Lys   | 195 |     |     |

&lt;210&gt; 5861

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5861

|   |    |    |    |    |
|---|----|----|----|----|
| Lys Asn Lys Thr Lys Ala Val Phe Pro Asn Phe Gly Met Asn Pro Pro | 1  | 5  | 10 | 15 |
| Leu Phe Gln Met Lys Thr Ala Ser Arg Ser Ser Ser Lys Arg Lys Ser | 20 | 25 | 30 |    |

## 5151

Leu Gly Gly Ala Gln Arg Ala Arg Cys Pro Ser Thr Ser Val Leu Gly  
                   35                                  40                                  45

Thr Trp Arg Val Ala Ala Ser Pro Pro Ala Pro Val Pro Ser Cys  
           50                                  55                                  60

<210> 5862

<211> 229

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (221)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5862

Ala Thr Lys Ile Asn Leu Ser Leu Ser Ala Leu Gly Asn Val Ile Ser  
   1                                  5                                  10                                  15

Ala Leu Val Asp Gly Lys Ser Thr His Ile Pro Tyr Arg Asp Ser Lys  
                   20                                  25                                  30

Leu Thr Arg Leu Leu Gln Asp Ser Leu Gly Gly Asn Ala Lys Thr Val  
           35                                  40                                  45

Met Val Ala Asn Val Gly Pro Ala Ser Tyr Asn Val Glu Glu Thr Leu  
       50                                  55                                  60

Thr Thr Leu Arg Tyr Ala Asn Arg Ala Lys Asn Ile Lys Asn Lys Pro  
   65                                  70                                  75                                  80

Arg Val Asn Glu Asp Pro Lys Asp Ala Leu Leu Arg Glu Phe Gln Glu  
                   85                                  90                                  95

Glu Ile Ala Arg Leu Lys Ala Gln Leu Glu Lys Arg Ser Ile Gly Arg  
                   100                                  105                                  110

Arg Lys Arg Arg Glu Lys Arg Arg Glu Gly Gly Gly Ser Gly Gly Gly  
           115                                  120                                  125

Gly Glu Glu Glu Glu Glu Gly Glu Glu Gly Glu Glu Glu Gly Asp  
       130                                  135                                  140

Asp Lys Asp Asp Tyr Trp Arg Glu Gln Gln Glu Lys Leu Glu Ile Glu  
   145                                  150                                  155                                  160

Lys Arg Ala Ile Val Glu Asp His Ser Leu Val Ala Glu Glu Lys Met

## 5152

165 170 175  
 Arg Leu Leu Lys Glu Lys Glu Lys Lys Met Glu Asp Leu Arg Arg Glu  
 180 185 190  
 Lys Asp Ala Ala Glu Met Leu Gly Ala Lys Ile Lys Val Pro Tyr Pro  
 195 200 205  
 Tyr Pro Ser Leu Gly Pro Cys Pro Val Thr Ala Phe Xaa Phe Ile Lys  
 210 215 220  
 Gln Gln Gln Lys Thr  
 225  
  
 <210> 5863  
 <211> 298  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 5863  
 Cys Glu Arg Gly Ser Leu His Phe Thr Gly Val Thr Gly Gly Asn Leu  
 1 5 10 15  
 Arg Val Asn Gly Lys Glu Arg Ala Ser Gly Ile Tyr Phe Gly Ala Asn  
 20 25 30  
 Glu Ala Leu Leu Ala Val Lys Asp Tyr Ile Arg Thr Gln Ile Ile Ser  
 35 40 45  
 Lys Lys Ile Asn Thr Lys Phe Phe Gln Glu Glu Asn Thr Glu Lys Leu  
 50 55 60  
 Lys Leu Lys Tyr Tyr Asn Leu Met Ile Gln Leu Asp Gln His Glu Gly  
 65 70 75 80  
 Ser Tyr Leu Ser Ile Cys Lys His Tyr Arg Ala Ile Tyr Asp Thr Pro  
 85 90 95  
 Cys Ile Gln Ala Glu Ser Glu Lys Trp Gln Gln Ala Leu Lys Ser Val  
 100 105 110  
 Val Leu Tyr Val Ile Leu Ala Pro Phe Asp Asn Glu Gln Ser Asp Leu  
 115 120 125  
 Val His Arg Ile Ser Gly Asp Lys Lys Leu Glu Glu Ile Pro Lys Tyr  
 130 135 140  
 Lys Asp Leu Leu Lys Leu Phe Thr Thr Met Glu Leu Met Arg Trp Ser  
 145 150 155 160

## 5153

Thr Leu Val Glu Asp Tyr Gly Met Glu Leu Arg Lys Gly Ser Leu Glu  
                             165                            170                            175  
 Ser Pro Ala Thr Asp Val Phe Gly Ser Thr Glu Glu Gly Glu Lys Arg  
                             180                            185                            190  
 Trp Lys Asp Leu Lys Asn Arg Val Val Glu His Asn Ile Arg Ile Met  
                             195                            200                            205  
 Ala Lys Tyr Tyr Thr Arg Ile Thr Met Lys Arg Met Ala Gln Leu Leu  
                             210                            215                            220  
 Asp Leu Ser Val Asp Glu Ser Glu Ala Phe Leu Ser Asn Leu Val Val  
                             225                            230                            235                            240  
 Asn Lys Thr Ile Phe Ala Lys Val Asp Arg Leu Ala Gly Ile Ile Asn  
                             245                            250                            255  
 Phe Gln Arg Pro Lys Asp Pro Asn Asn Leu Leu Asn Asp Trp Ser Gln  
                             260                            265                            270  
 Lys Leu Asn Ser Leu Met Ser Leu Val Asn Lys Thr Thr His Leu Ile  
                             275                            280                            285  
 Ala Lys Glu Glu Met Ile His Asn Leu Gln  
                             290                            295

&lt;210&gt; 5864

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5864

Asn Ser Ala Glu Cys Asn Pro Arg Phe Xaa Asn Ala Thr Ile Val Cys  
   1                            5                            10                            15

Asn Ser Leu Asp Gly Ser Asn Trp Gly Gln Glu Gln Arg Glu Asp His  
                             20                            25                            30

Leu Cys Phe Ser Pro Gly Ser Glu Val Lys Val Arg Ser Lys Gly Glu  
                             35                            40                            45

Arg Ala Leu Gly Val Met Ser Arg Gly Gly Pro Arg Trp Lys Arg Ala

## 5154

50                                      55                                      60  
 Trp Pro Gly Thr Gln Trp Leu Ala Leu Phe Glu Pro Ser Gly Thr Ala  
 65                                      70                                      75                                      80  
 Leu Ala His Phe Gln Gly Leu Leu Pro Pro Leu Thr Pro Ser Leu Pro  
 85                                      90                                      95  
 Thr Val His Ser Asp Leu  
 100

<210> 5865  
 <211> 345  
 <212> PRT  
 <213> Homo sapiens

<400> 5865  
 Leu Pro Val Arg Ala Glu Pro Thr Arg Ala Ala Ala Met Ser Gly Asp  
 1                                      5                                      10                                      15  
 Glu Met Ile Phe Asp Pro Thr Met Ser Lys Lys Lys Lys Lys Lys Lys  
 20                                      25                                      30  
 Lys Pro Phe Met Leu Asp Glu Glu Gly Asp Thr Gln Thr Glu Glu Thr  
 35                                      40                                      45  
 Gln Pro Ser Glu Thr Lys Glu Val Glu Pro Glu Pro Thr Glu Asp Lys  
 50                                      55                                      60  
 Asp Leu Glu Ala Asp Glu Glu Asp Thr Arg Lys Lys Asp Ala Ser Asp  
 65                                      70                                      75                                      80  
 Asp Leu Asp Asp Leu Asn Phe Phe Asn Gln Lys Lys Lys Lys Lys Lys  
 85                                      90                                      95  
 Thr Lys Lys Ile Phe Asp Ile Asp Glu Ala Glu Glu Gly Val Lys Asp  
 100                                      105                                      110  
 Leu Lys Ile Glu Ser Asp Val Gln Glu Pro Thr Glu Pro Glu Asp Asp  
 115                                      120                                      125  
 Leu Asp Ile Met Leu Gly Asn Lys Lys Lys Lys Lys Lys Asn Val Lys  
 130                                      135                                      140  
 Phe Pro Asp Glu Asp Glu Ile Leu Glu Lys Asp Glu Ala Leu Glu Asp  
 145                                      150                                      155                                      160  
 Glu Asp Asn Lys Lys Asp Asp Gly Ile Ser Phe Ser Asn Gln Thr Gly  
 165                                      170                                      175

## 5155

Pro Ala Trp Ala Gly Ser Glu Arg Asp Tyr Thr Tyr Glu Glu Leu Leu  
                   180                                  185                                  190  
 Asn Arg Val Phe Asn Ile Met Arg Glu Lys Asn Pro Asp Met Val Ala  
                   195                                  200                                  205  
 Gly Glu Lys Arg Lys Phe Val Met Lys Pro Pro Gln Val Val Arg Val  
                   210                                  215                                  220  
 Gly Thr Lys Lys Thr Ser Phe Val Asn Phe Thr Asp Ile Cys Lys Leu  
                   225                                  230                                  235                                  240  
 Leu His Arg Gln Pro Lys His Leu Leu Ala Phe Leu Leu Ala Glu Leu  
                                   245                                  250                                  255  
 Gly Thr Ser Gly Ser Ile Asp Gly Asn Asn Gln Leu Val Ile Lys Gly  
                                   260                                  265                                  270  
 Arg Phe Gln Gln Lys Gln Ile Glu Asn Val Leu Arg Arg Tyr Ile Lys  
                   275                                  280                                  285  
 Glu Tyr Val Thr Cys His Thr Cys Arg Ser Pro Asp Thr Ile Leu Gln  
                   290                                  295                                  300  
 Lys Asp Thr Arg Leu Tyr Phe Leu Gln Cys Glu Thr Cys His Ser Arg  
                   305                                  310                                  315                                  320  
 Cys Ser Val Ala Ser Ile Lys Thr Gly Phe Gln Ala Val Thr Gly Lys  
                                   325                                  330                                  335  
 Arg Ala Gln Leu Arg Ala Lys Ala Asn  
                                   340                                  345

&lt;210&gt; 5866

&lt;211&gt; 194

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5866

Arg Thr Ser Met Gly Ile Leu Tyr Ser Glu Pro Ile Cys Gln Ala Ala  
           1                                  5                                  10                                  15  
 Tyr Gln Asn Asp Phe Gly Gln Val Trp Arg Trp Val Lys Glu Asp Ser  
                   20                                  25                                  30  
 Ser Tyr Ala Asn Val Gln Asp Gly Phe Asn Gly Asp Thr Pro Leu Ile  
                   35                                  40                                  45



## 5156

Cys Ala Cys Arg Arg Gly His Val Arg Ile Val Ser Phe Leu Leu Arg  
           50                                  55                                  60  
 Arg Asn Ala Asn Val Asn Leu Lys Asn Gln Lys Glu Arg Thr Cys Leu  
           65                                  70                                  75                                  80  
 His Tyr Ala Val Lys Lys Lys Phe Thr Phe Ile Asp Tyr Leu Leu Ile  
                                   85                                  90                                  95  
 Ile Leu Leu Met Pro Val Leu Leu Ile Gly Tyr Phe Leu Met Val Ser  
                                   100                                  105                                  110  
 Lys Thr Lys Gln Asn Glu Ala Leu Val Arg Met Leu Leu Asp Ala Gly  
                                   115                                  120                                  125  
 Val Glu Val Asn Ala Thr Asp Cys Tyr Gly Cys Thr Ala Leu His Tyr  
                                   130                                  135                                  140  
 Ala Cys Glu Met Lys Asn Gln Ser Leu Ile Pro Leu Leu Leu Glu Ala  
           145                                  150                                  155                                  160  
 Arg Ala Asp Pro Thr Ile Lys Asn Lys His Gly Glu Ser Ser Leu Asp  
                                   165                                  170                                  175  
 Ile Ala Arg Arg Leu Lys Phe Ser Gln Ile Glu Leu Met Leu Arg Lys  
                                   180                                  185                                  190  
 Ala Leu

&lt;210&gt; 5867

&lt;211&gt; 469

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (65)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

5157

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (436)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5867

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Ser Ala Ser Phe Ser Arg Gly Xaa Gln Leu Ser Phe Thr Asp Leu Gly
 1           5           10           15

Leu Pro Pro Thr Asp His Leu Gln Ala Ser Phe Gly Phe Gln Thr Phe
          20           25           30

Gln Pro Ser Gly Ile Leu Leu Asp His Gln Thr Trp Thr Arg Xaa Leu
          35           40           45

Gln Val Thr Leu Glu Asp Gly Tyr Ile Glu Leu Ser Thr Ser Asp Ser
          50           55           60

Xaa Gly Pro Ile Phe Lys Ser Pro Gln Thr Tyr Met Asp Gly Leu Leu
 65           70           75           80

His Tyr Val Ser Val Ile Ser Asp Asn Ser Gly Leu Arg Leu Leu Ile
          85           90           95

Asp Asp Gln Leu Leu Arg Asn Ser Lys Arg Leu Lys His Ile Ser Ser
          100          105          110

Ser Arg Gln Ser Leu Arg Leu Gly Gly Ser Asn Phe Glu Gly Cys Ile
          115          120          125

Ser Asn Val Phe Val Gln Arg Leu Ser Leu Ser Pro Glu Val Leu Asp
          130          135          140

Leu Thr Ser Asn Ser Leu Lys Arg Asp Val Ser Leu Gly Gly Cys Ser
          145          150          155          160

Leu Asn Lys Pro Pro Phe Leu Met Leu Leu Lys Gly Ser Thr Arg Phe
          165          170          175

Asn Lys Thr Lys Thr Phe Arg Ile Asn Gln Leu Leu Gln Asp Thr Pro
          180          185          190

Val Ala Ser Pro Arg Ser Val Lys Val Trp Gln Asp Ala Cys Ser Pro
          195          200          205

Leu Pro Lys Thr Gln Ala Asn His Gly Ala Leu Gln Phe Gly Asp Ile
          210          215          220

Pro Thr Ser His Leu Leu Phe Lys Leu Pro Gln Glu Leu Leu Lys Pro
          225          230          235          240

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## 5158

Arg Ser Gln Phe Ala Val Asp Met Gln Thr Thr Ser Ser Arg Gly Leu  
                   245                  250                  255  
 Val Phe His Thr Gly Thr Lys Asn Ser Phe Met Ala Leu Tyr Leu Ser  
                   260                  265                  270  
 Lys Gly Arg Leu Val Phe Ala Leu Gly Thr Asp Gly Lys Lys Leu Arg  
                   275                  280                  285  
 Ile Lys Ser Lys Glu Lys Cys Asn Asp Gly Lys Trp His Thr Val Val  
                   290                  295                  300  
 Phe Gly His Asp Gly Glu Lys Gly Arg Leu Val Val Asp Gly Leu Arg  
 305                  310                  315                  320  
 Ala Arg Glu Gly Ser Leu Pro Gly Asn Ser Thr Ile Ser Ile Arg Ala  
                   325                  330                  335  
 Pro Val Tyr Leu Gly Ser Pro Pro Ser Gly Lys Pro Lys Ser Leu Pro  
                   340                  345                  350  
 Thr Asn Ser Phe Val Gly Cys Leu Lys Asn Phe Gln Leu Asp Ser Lys  
                   355                  360                  365  
 Pro Leu Tyr Thr Pro Ser Ser Ser Phe Gly Val Ser Ser Cys Leu Gly  
                   370                  375                  380  
 Gly Pro Leu Glu Lys Gly Ile Tyr Phe Ser Glu Glu Gly Gly His Val  
 385                  390                  395                  400  
 Val Leu Ala His Ser Val Leu Leu Gly Pro Glu Phe Lys Leu Val Phe  
                   405                  410                  415  
 Ser Ile Arg Pro Arg Ser Leu Thr Gly Ile Leu Ile His Ile Gly Ser  
                   420                  425                  430  
 Gln Pro Gly Xaa Ala Leu Met Cys Leu Pro Gly Gly Arg Lys Gly His  
                   435                  440                  445  
 Gly Leu Tyr Gly Gln Trp Gly Arg Trp Asp Leu Asn Val Gly His Thr  
                   450                  455                  460  
 Lys Ala Val Ser Val  
 465

&lt;210&gt; 5868

&lt;211&gt; 83

&lt;212&gt; PRT

## 5159

&lt;213&gt; Homo sapiens

&lt;400&gt; 5868

```

Phe Leu Ile Leu Ser Gly Glu Leu Leu Ala Arg Ile Ile Tyr Leu Gln
 1             5             10             15

Ile Ile Leu Asp Gln Arg Leu Gly Ala Gly Leu Thr Pro Ser Ser Arg
          20             25             30

Leu Gly Ala Ser Ile His Phe Leu Val Gly Leu Asn Ile Pro Pro Ala
          35             40             45

Phe Arg Arg Ile His Arg Thr Tyr Cys Ser Phe Gln Met Thr Phe Trp
          50             55             60

Lys Ile Val Pro Phe Ala Asn Arg Asn Met Pro Glu Gly Ile Phe Ser
 65             70             75             80

Ser Phe Ile

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&lt;210&gt; 5869

&lt;211&gt; 117

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5869

```

Ser Cys Thr Arg His Gln Ser Leu Pro Gly Ser Cys Asp Glu Leu His
 1             5             10             15

Leu Ser Pro Phe Leu Pro Gln Pro Gln Thr Leu Ser Phe Lys Glu Gly
          20             25             30

Leu Pro Gly Ser Leu His Pro Thr Ala Pro Met Arg Leu Gly Pro Arg
          35             40             45

Val His Ser Pro Gly Gly Ser Gln Leu Ser Gly Arg Ser Phe Pro Pro
          50             55             60

Asn Ile Phe Gln Leu Leu Gly Gly Asp His Arg Ala Leu Leu Leu Lys
 65             70             75             80

Ile Trp Leu Leu Gln Arg Pro Glu Ser Gln Glu Gly Leu Leu Pro Gly
          85             90             95

Arg Leu Val Val Met Glu Arg Arg Val Lys Met Thr Ser Cys Pro Ser
          100            105            110

Cys Pro Arg Phe Cys

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## 5160

115

&lt;210&gt; 5870

&lt;211&gt; 170

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (149)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (155)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5870

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Tyr | Phe | Pro | Val | Lys | Met | Pro | Thr | Thr | Lys | Lys | Thr | Leu | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Ser | Ser | Phe | Phe | Thr | Ser | Leu | Gly | Ser | Phe | Ile | Val | Ile | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ile | Leu | Gly | Thr | Gln | Ala | Trp | Ile | Thr | Ser | Thr | Ile | Ala | Xaa | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ser | Ala | Ser | Asn | Gly | Ser | Ile | Phe | Ile | Thr | Tyr | Gly | Leu | Phe | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Glu | Ser | Ser | Glu | Glu | Leu | Ser | His | Gly | Leu | Ala | Glu | Pro | Lys | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Phe | Ala | Val | Leu | Glu | Ile | Leu | Asn | Asn | Ser | Ser | Gln | Lys | Asn | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Phe | Gly | Asp | Tyr | Pro | Val | Pro | Gly | Pro | Glu | Phe | Asp | His | Val | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Glu | Leu | Trp | Val | Tyr | Leu | Leu | Gln | Gln | His | Gln | Gln | Pro | Leu | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ile | Pro | Gly | Ala | Arg | Arg | Gly | Cys | Thr | Pro | Gly | Thr | Gly | Ser | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

## 5161

Ile Leu Arg Phe Xaa Thr Met Ile Leu Leu Xaa Arg Thr Arg Ser Pro  
 145 150 155 160

Thr Asn Phe Pro Lys Val Val Gln Met Leu  
 165 170

<210> 5871

<211> 173

<212> PRT

<213> Homo sapiens

<400> 5871

Arg Thr Tyr Phe Pro Val Lys Met Pro Thr Thr Lys Lys Thr Leu Met  
 1 5 10 15

Phe Leu Ser Ser Phe Phe Thr Ser Leu Gly Ser Phe Ile Val Ile Cys  
 20 25 30

Ser Ile Leu Gly Thr Gln Ala Trp Ile Thr Ser Thr Ile Ala Val Arg  
 35 40 45

Asp Ser Ala Ser Asn Gly Ser Ile Phe Ile Thr Tyr Gly Leu Phe Arg  
 50 55 60

Gly Glu Ser Ser Glu Glu Leu Ser His Gly Leu Ala Glu Pro Lys Lys  
 65 70 75 80

Lys Phe Ala Ala Ser Phe Val Phe Val Thr Met Ile Leu Phe Val Ala  
 85 90 95

Asn Thr Gln Ser Asn Gln Leu Ser Glu Glu Leu Phe Gln Met Leu Tyr  
 100 105 110

Pro Ala Thr Thr Ser Lys Gly Thr Thr His Ser Tyr Gly Tyr Ser Phe  
 115 120 125

Trp Leu Ile Leu Leu Val Ile Leu Leu Asn Ile Val Thr Val Thr Ile  
 130 135 140

Ile Ile Phe Tyr Gln Lys Ala Arg Tyr Gln Arg Lys Gln Glu Gln Arg  
 145 150 155 160

Lys Pro Met Glu Tyr Ala Pro Arg Asp Gly Ile Leu Phe  
 165 170

<210> 5872

## 5162

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5872

His Arg Asn Arg Pro Ser Gln Cys His Leu Leu Asn Leu Trp Arg Pro  
 1 5 10 15

Pro Asp Leu Glu Glu Pro Thr Lys Val Asp Lys Leu Gln Glu Pro Leu  
 20 25 30

Leu Glu Ala Leu Lys Ile Tyr Ile Arg Lys Arg Arg Pro Ser Lys Pro  
 35 40 45

His Met Phe Pro Lys Ile Leu Met Lys Ile Thr Asp Leu Arg Ser Ile  
 50 55 60

Ser Ala Lys Gly Ala Glu Arg Val Ile Thr Leu Lys Met Glu Ile Pro  
 65 70 75 80

Gly Ser Met Pro Pro Leu Ile Gln Glu Met Leu Glu Asn Ser Glu Gly  
 85 90 95

His Glu Pro Leu Thr Pro Ser Ser Ser Gly Asn Thr Ala Glu His Ser  
 100 105 110

Pro Ser Ile Ser Pro Ser Ser Val Glu Asn Ser Gly Val Ser Gln Ser  
 115 120 125

Pro Leu Val Gln  
 130

&lt;210&gt; 5873

&lt;211&gt; 326

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5873

Ala His Ala Ser Ala His Ala Ser Ala Trp Val Pro Ala Pro Gln Arg  
 1 5 10 15

Ser Arg Asp Ser Pro Arg Arg Arg Ala Arg Arg Pro Glu Leu Pro Lys  
 20 25 30

Pro Ser Arg Ala Ala His Thr Pro Gly Leu His Ser Leu Phe Gln His  
 35 40 45

Pro Leu Val Leu Ala Ala Ala Arg Val Pro Glu Thr Glu Leu Pro Gln  
 50 55 60

## 5163

Arg Pro Arg Arg Arg Arg Cys Glu Gly Pro Met Arg Ala Pro Leu Leu  
 65 70 75 80

Pro Pro Ala Pro Val Val Leu Ser Leu Leu Ile Leu Gly Ser Gly His  
 85 90 95

Tyr Ala Ala Gly Leu Asp Leu Asn Asp Thr Tyr Ser Gly Lys Arg Glu  
 100 105 110

Pro Phe Ser Gly Asp His Ser Ala Asp Gly Phe Glu Val Thr Ser Arg  
 115 120 125

Ser Glu Met Ser Ser Gly Ser Glu Ile Ser Pro Val Ser Glu Met Pro  
 130 135 140

Ser Ser Ser Glu Pro Ser Ser Gly Ala Asp Tyr Asp Tyr Ser Glu Glu  
 145 150 155 160

Tyr Asp Asn Glu Pro Gln Ile Pro Gly Tyr Ile Val Asp Asp Ser Val  
 165 170 175

Arg Val Glu Gln Val Val Lys Pro Pro Gln Asn Lys Thr Glu Ser Glu  
 180 185 190

Asn Thr Ser Asp Lys Pro Lys Arg Lys Lys Lys Gly Gly Lys Asn Gly  
 195 200 205

Lys Asn Arg Arg Asn Arg Lys Lys Lys Asn Pro Cys Asn Ala Glu Phe  
 210 215 220

Gln Asn Phe Cys Ile His Gly Glu Cys Lys Tyr Ile Glu His Leu Glu  
 225 230 235 240

Ala Val Thr Cys Lys Cys Gln Gln Glu Tyr Phe Gly Glu Arg Cys Gly  
 245 250 255

Glu Lys Ser Met Lys Thr His Ser Met Ile Asp Ser Ser Leu Ser Lys  
 260 265 270

Ile Ala Leu Ala Ala Ile Ala Ala Phe Met Ser Ala Val Ile Leu Thr  
 275 280 285

Ala Val Ala Val Ile Thr Val Gln Leu Arg Arg Gln Tyr Val Arg Lys  
 290 295 300

Tyr Glu Gly Glu Ala Glu Glu Arg Lys Lys Leu Arg Gln Glu Asn Gly  
 305 310 315 320

Asn Val His Ala Ile Ala  
 325



## 5164

&lt;210&gt; 5874

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5874

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Gln | Arg | Ser | Ser | Leu | Val | Asp | Arg | Val | Arg | Leu | His | Leu | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Lys | Ile | Lys | Ile | Lys | Leu | Phe | Ser | Glu | Glu | Gln | Met | Ser | His | Ser | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Asn | Asp | Pro | Leu | Ser | Arg | Asn | Met | Val | Glu | Phe | Ser | Pro | Ile | Gln | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ser | His | Ile | Gln | Lys | Thr | Thr | Ser | His | Tyr |     |     |     |     |     |     |
|     | 50  |     |     |     |     | 55  |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 5875

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5875

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Leu | Trp | Ser | Arg | Glu | Glu | Ala | Met | Ala | Thr | Met | Glu | Asn | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Val | Ile | Cys | Ala | Leu | Val | Leu | Val | Ser | Met | Leu | Ala | Leu | Gly | Thr | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ala | Glu | Ala | Gln | Thr | Glu | Thr | Cys | Thr | Val | Ala | Pro | Arg | Glu | Arg | Gln |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Asn | Cys | Gly | Phe | Pro | Gly | Val | Thr | Pro | Ser | Gln | Cys | Ala | Asn | Lys | Gly |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Cys | Cys | Phe | Asp | Asp | Thr | Val | Arg | Gly | Val | Pro | Trp | Cys | Phe | Tyr | Pro |
|     | 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Asn | Thr | Ile | Asp | Val | Pro | Pro | Glu | Glu | Glu | Cys | Glu | Phe |     |     |     |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     |     |

&lt;210&gt; 5876

&lt;211&gt; 55

## 5165

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (24)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5876

Lys Val Pro Val Arg Asn Ser Arg Val Asp Pro Arg Val Arg Ile Ser  
 1 5 10 15

Pro Arg Ala Arg Leu Pro Pro Xaa Pro Asp Thr Ser Asp Thr Leu Leu  
 20 25 30

Gln Leu Cys Leu Gly Ser Gln His Arg Leu Thr Ala Leu Thr Leu Thr  
 35 40 45

Thr Gln Asn Trp Pro Lys Asn  
 50 55

&lt;210&gt; 5877

&lt;211&gt; 214

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5877

Ala Gly Arg Pro Met Lys Val Gly His Val Thr Glu Arg Thr Asp Ala  
 1 5 10 15

Ser Ser Ala Ser Ser Phe Leu Asp Ser Asp Glu Leu Glu Arg Thr Gly  
 20 25 30

Ile Asp Leu Gly Thr Thr Gly Arg Leu Gln Leu Met Ala Arg Leu Ala  
 35 40 45

Glu Gly Thr Gly Leu Gln Ile Pro Pro Ala Ala Gln Gln Ala Leu Gln  
 50 55 60

Met Ser Gly Ser Leu Ala Phe Gly Ala Val Ala Glu Phe Ser Phe Val  
 65 70 75 80

Ile Asp Leu Gln Thr Arg Leu Ser Gln Gln Thr Glu Ala Ser Ala Leu  
 85 90 95

Ala Ala Ala Ala Ser Val Gln Pro Leu Ala Thr Gln Cys Phe Gln Leu  
 100 105 110

Ser Asn Met Phe Asn Pro Gln Thr Glu Glu Glu Val Gly Trp Asp Thr

## 5166

115                                      120                                      125  
 Glu Ile Lys Asp Asp Val Ile Glu Glu Cys Asn Lys His Gly Gly Val  
     130                                      135                                      140  
 Ile His Ile Tyr Val Asp Lys Asn Ser Ala Gln Gly Asn Val Tyr Val  
     145                                      150                                      155                                      160  
 Lys Cys Pro Ser Ile Ala Ala Ala Ile Ala Ala Val Asn Ala Leu His  
                                     165                                      170                                      175  
 Gly Arg Trp Phe Ala Gly Lys Met Ile Thr Ala Ala Tyr Val Pro Leu  
                                     180                                      185                                      190  
 Pro Thr Tyr His Asn Leu Phe Pro Asp Ser Met Thr Ala Thr Gln Leu  
                                     195                                      200                                      205  
 Leu Val Pro Ser Arg Arg  
     210

&lt;210&gt; 5878

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5878

Asn Cys Ser Pro Ala Phe Tyr Gly Ser Ser Leu Pro Cys Pro Gln Thr  
     1                                      5                                      10                                      15  
 Gln Gln Lys Arg Arg Gly Arg Ile Arg Gly Leu Ser Arg Pro Ala Pro  
                                     20                                      25                                      30  
 Leu Pro Thr Cys His Thr Arg Cys Glu Phe Glu His Ser Pro Xaa Met  
                                     35                                      40                                      45  
 Glu Thr Ser His Pro Gln Leu Asn Asn Gly Pro Phe Met Pro Thr Leu  
                                     50                                      55                                      60  
 Pro Thr Arg Arg Gly Gln Arg Cys Thr Arg Arg Pro Ser Ser Ser Pro  
     65                                      70                                      75                                      80  
 Ser Ser Ala Pro Ser His Tyr Ser Trp Phe Tyr  
                                     85                                      90

## 5167

&lt;210&gt; 5879

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5879

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gln | Lys | Thr | Ser | Ser | Leu | Leu | Pro | Ala | Leu | Ser | Leu | Gln | Leu | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Thr | Arg | Phe | Ser | Ile | Met | Cys | Ser | Val | Lys | Glu | Glu | Phe | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Gln | Ser | Ile | Ile | Thr | Glu | Leu | Val | Leu | Lys | Gly | Glu | Phe | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Val | Lys | Arg | Gln |
|     | 50  |     |     |

&lt;210&gt; 5880

&lt;211&gt; 43

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5880

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Asp | Ser | Phe | Phe | Thr | Gly | Ile | Ala | Phe | Xaa | Thr | Ser | Ile | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asn | Asn | Cys | Val | Cys | His | Phe | Ser | Pro | Leu | Lys | Ser | Asp | Gln | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ile | Leu | Lys | Glu | Gly | Asp | Leu | Val | Lys | Met |
|     |     | 35  |     |     |     |     | 40  |     |     |     |

&lt;210&gt; 5881

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5881

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Thr | Arg | Pro | Ala | Gln | Thr | Ala | Leu | Pro | Tyr | Ala | Met | Asn | Ser | Glu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5168

1                      5                      10                      15  
 Phe Ser Ser Val Leu Ala Ala Gln Leu Lys His His Ser Glu Asn Lys  
                             20                      25                      30  
 Gly Leu Asp Lys Val Met Glu Thr Gln Ala Gln Val Asp Glu Leu Lys  
                             35                      40                      45  
 Gly Ile Met Val Arg Asn Ile Asp Leu Val Ala Gln Arg Gly Glu Arg  
                             50                      55                      60  
 Leu Glu Leu Leu Ile Asp Lys Thr Glu Asn Leu Val Asp Ser Ser Val  
                             65                      70                      75                      80  
 Thr Phe Lys Thr Thr Ser Arg Asn Leu Ala Arg Ala Met Cys Met Lys  
                             85                      90                      95  
 Asn Leu Lys Leu Thr Ile Ile Ile Ile Ile Val Ser Ile Val Phe Ile  
                             100                      105                      110  
 Tyr Ile Ile Val Ser Pro Leu Cys Gly Gly Phe Thr Trp Pro Ser Cys  
                             115                      120                      125  
 Val Lys Lys  
                             130

&lt;210&gt; 5882

&lt;211&gt; 226

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (197)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5882

Asn Phe Gly Ile Lys Asp Lys Pro Thr Phe Ile Lys Gly Ile Gly Ala  
                             1                      5                      10                      15  
 Gly Gly Ser Ile Thr Gly Leu Lys Phe Asn Pro Leu Asn Thr Asn Gln  
                             20                      25                      30  
 Phe Tyr Ala Ser Ser Met Glu Gly Thr Thr Arg Leu Gln Asp Phe Lys  
                             35                      40                      45  
 Gly Asn Ile Leu Arg Val Phe Ala Ser Ser Asp Thr Ile Asn Ile Trp  
                             50                      55                      60

## 5169

Phe Cys Ser Leu Asp Val Ser Ala Ser Ser Arg Met Val Val Thr Gly  
 65 70 75 80  
 Asp Asn Val Gly Asn Val Ile Leu Leu Asn Met Asp Gly Lys Glu Leu  
 85 90 95  
 Trp Asn Leu Arg Met His Lys Lys Lys Val Thr His Val Ala Leu Asn  
 100 105 110  
 Pro Cys Cys Asp Trp Phe Leu Ala Thr Ala Ser Val Asp Gln Thr Val  
 115 120 125  
 Lys Ile Trp Asp Leu Arg Gln Val Arg Gly Lys Ala Ser Phe Leu Tyr  
 130 135 140  
 Ser Leu Pro His Arg His Pro Val Asn Ala Ala Cys Phe Ser Pro Asp  
 145 150 155 160  
 Gly Ala Arg Leu Leu Thr Thr Asp Gln Lys Ser Glu Ile Arg Val Tyr  
 165 170 175  
 Ser Ala Ser Gln Trp Asp Cys Pro Leu Gly Leu Ile Pro His Pro His  
 180 185 190  
 Arg His Phe Gln Xaa Leu Thr Pro Ile Lys Ala Ala Trp Asp Pro Arg  
 195 200 205  
 Tyr Asn Leu Ile Val Val Gly Arg Tyr Pro Asp Pro Asn Phe Lys Ser  
 210 215 220  
 Cys Thr  
 225

&lt;210&gt; 5883

&lt;211&gt; 484

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5883

Trp Leu Leu Arg Ser Pro Gly Lys Leu Thr Ala Arg Glu Arg Ile Ser  
 1 5 10 15

Leu Leu Leu Asp Pro Gly Ser Phe Xaa Glu Ser Asp Met Phe Val Glu  
 20 25 30

## 5170

His Arg Cys Ala Asp Phe Gly Met Ala Ala Asp Lys Asn Lys Phe Pro  
 35 40 45  
 Gly Asp Ser Val Val Thr Gly Arg Gly Arg Ile Asn Gly Arg Leu Val  
 50 55 60  
 Tyr Val Phe Ser Gln Asp Phe Thr Val Phe Gly Gly Ser Leu Ser Gly  
 65 70 75 80  
 Ala His Ala Gln Lys Ile Cys Lys Ile Met Asp Gln Ala Ile Thr Val  
 85 90 95  
 Gly Ala Pro Val Ile Gly Leu Asn Asp Ser Gly Gly Ala Arg Ile Gln  
 100 105 110  
 Glu Gly Val Glu Ser Leu Ala Gly Tyr Ala Asp Ile Phe Leu Arg Asn  
 115 120 125  
 Val Thr Ala Ser Gly Val Ile Pro Gln Ile Ser Leu Ile Met Gly Pro  
 130 135 140  
 Cys Ala Gly Gly Ala Val Tyr Ser Pro Ala Leu Thr Asp Phe Thr Phe  
 145 150 155 160  
 Met Val Lys Asp Thr Ser Tyr Leu Phe Ile Thr Gly Pro Asp Val Val  
 165 170 175  
 Lys Ser Val Thr Asn Glu Asp Val Thr Gln Glu Glu Leu Gly Gly Ala  
 180 185 190  
 Lys Thr His Thr Thr Met Ser Gly Val Ala His Arg Ala Phe Glu Asn  
 195 200 205  
 Asp Val Asp Ala Leu Cys Asn Leu Arg Asp Phe Phe Asn Tyr Leu Pro  
 210 215 220  
 Leu Ser Ser Gln Asp Pro Ala Pro Val Arg Glu Cys His Asp Pro Ser  
 225 230 235 240  
 Asp Arg Leu Val Pro Glu Leu Asp Thr Ile Val Pro Leu Glu Ser Thr  
 245 250 255  
 Lys Ala Tyr Asn Met Val Asp Ile Ile His Ser Val Val Asp Glu Arg  
 260 265 270  
 Glu Phe Phe Glu Ile Met Pro Asn Tyr Ala Lys Asn Ile Ile Val Gly  
 275 280 285  
 Phe Ala Arg Met Asn Gly Arg Thr Val Gly Ile Val Gly Asn Gln Pro  
 290 295 300

## 5171

Lys Val Ala Ser Gly Cys Leu Asp Ile Asn Ser Ser Val Lys Gly Ala  
 305 310 315 320  
 Arg Phe Val Arg Phe Cys Asp Ala Phe Asn Ile Pro Leu Ile Thr Phe  
 325 330 335  
 Val Asp Val Pro Gly Phe Leu Pro Gly Thr Ala Gln Glu Tyr Gly Gly  
 340 345 350  
 Ile Ile Arg His Gly Ala Lys Leu Leu Tyr Ala Phe Ala Glu Ala Thr  
 355 360 365  
 Val Pro Lys Val Thr Val Ile Thr Arg Lys Ala Tyr Gly Gly Ala Tyr  
 370 375 380  
 Asp Val Met Ser Ser Lys His Leu Cys Gly Asp Thr Asn Tyr Ala Trp  
 385 390 395 400  
 Pro Thr Ala Glu Ile Ala Val Met Gly Ala Lys Gly Ala Val Glu Ile  
 405 410 415  
 Ile Phe Lys Gly His Glu Asn Val Glu Ala Ala Gln Ala Glu Tyr Ile  
 420 425 430  
 Glu Lys Phe Ala Asn Pro Phe Pro Ala Ala Val Arg Gly Phe Val Asp  
 435 440 445  
 Asp Ile Ile Gln Pro Ser Ser Thr Arg Ala Arg Ile Cys Cys Asp Leu  
 450 455 460  
 Asp Val Leu Ala Ser Lys Lys Val Gln Arg Pro Trp Arg Lys His Ala  
 465 470 475 480  
 Asn Ile Pro Leu

&lt;210&gt; 5884

&lt;211&gt; 344

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (56)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE



## 5172

&lt;222&gt; (62)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (110)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (325)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (327)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5884

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Lys | Met | Lys | Ile | Phe | Ser | Glu | Ser | His | Lys | Thr | Val | Phe | Val | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | His | Cys | Pro | Tyr | Met | Ala | Glu | Ser | Cys | Arg | Gln | His | Val | Glu | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Met | Leu | Val | Lys | Asn | Arg | Thr | Gln | Gly | Ile | Ile | Pro | Leu | Ala | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Lys | Ser | Leu | Trp | Thr | Xaa | Ser | Val | Glu | Ser | Ser | Xaa | Glu | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Arg | Ile | Met | Tyr | Asp | Ile | Phe | Pro | Phe | Lys | Lys | Leu | Val | Asn | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Val | Ser | Asp | Ser | Gly | Ala | His | Val | Leu | Asn | Ser | Trp | Thr | Gln | Glu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gln | Asn | Leu | Gln | Glu | Leu | Met | Ala | Ala | Leu | Ala | Ala | Xaa | Gly | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asn | Pro | Arg | Ala | Asp | Pro | Glu | Cys | Cys | Ser | Ile | Leu | His | Gly | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | Ala | Val | Glu | Thr | Leu | Cys | Lys | Ile | Thr | Glu | Tyr | Gln | His | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Thr | Leu | Leu | Met | Glu | Asn | Ala | Glu | Arg | Val | Gly | Asn | Arg | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ile | Ile | Cys | Ile | Thr | Asn | Ala | Lys | Ser | Asp | Ser | His | Val | Arg | Met |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

## 5173

Leu Glu Asp Cys Val Gln Glu Thr Ile His Glu His Asn Lys Leu Ala  
 180 185 190

Ala Asn Ser Asp His Leu Met Gln Ile Gln Lys Cys Glu Leu Val Leu  
 195 200 205

Ile His Thr Tyr Pro Val Gly Glu Asp Ser Leu Val Ser Asp Arg Ser  
 210 215 220

Lys Lys Glu Leu Ser Pro Val Leu Thr Ser Glu Val His Ser Val Arg  
 225 230 235 240

Ala Gly Arg His Leu Ala Thr Lys Leu Asn Ile Leu Val Gln Gln His  
 245 250 255

Phe Asp Leu Ala Ser Thr Thr Ile Thr Asn Ile Pro Met Lys Glu Glu  
 260 265 270

Gln His Ala Asn Thr Ser Ala Asn Tyr Asp Val Glu Leu Leu His His  
 275 280 285

Lys Asp Ala His Val Asp Phe Leu Lys Ser Gly Asp Ser His Leu Gly  
 290 295 300

Gly Gly Ser Arg Glu Gly Ser Phe Lys Glu Thr Ile Thr Leu Lys Trp  
 305 310 315 320

Cys Thr Pro Arg Xaa Lys Xaa Thr Leu Cys Phe Leu Leu Phe Gln Glu  
 325 330 335

Leu His Tyr Cys Thr Gly Ala Leu  
 340

<210> 5885

<211> 365

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (155)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (171)

<223> Xaa equals any of the naturally occurring L-amino acids

## 5174

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (192)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5885

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | His | Ser | Trp | Ser | Ser | Ser | Ser | Ser | Thr | Lys | Arg | Trp | Thr | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Thr | Ala | Glu | Thr | Met | Gly | Pro | Pro | Ser | Ala | Pro | Pro | Cys | Arg | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| His | Val | Pro | Trp | Lys | Glu | Val | Leu | Leu | Thr | Ala | Ser | Leu | Leu | Thr | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Trp | Asn | Pro | Pro | Thr | Thr | Ala | Lys | Leu | Thr | Ile | Glu | Ser | Thr | Pro | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asn | Val | Ala | Glu | Gly | Lys | Glu | Val | Leu | Leu | Leu | Ala | His | Asn | Leu | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Gln | Asn | Arg | Ile | Gly | Tyr | Ser | Trp | Tyr | Lys | Gly | Glu | Arg | Val | Asp | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asn | Ser | Leu | Ile | Val | Gly | Tyr | Val | Ile | Gly | Thr | Gln | Gln | Ala | Thr | Pro |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Pro | Ala | Tyr | Ser | Gly | Arg | Glu | Thr | Ile | Tyr | Pro | Asn | Ala | Ser | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Ile | Gln | Asn | Val | Thr | Gln | Asn | Asp | Thr | Gly | Phe | Tyr | Thr | Leu | Gln |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Ile | Lys | Ser | Asp | Leu | Val | Asn | Glu | Glu | Xaa | Thr | Gly | Gln | Phe | His |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Val | Tyr | Pro | Glu | Leu | Pro | Lys | Pro | Ser | Ile | Xaa | Ser | Asn | Asn | Ser | Asn |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Pro | Val | Glu | Asp | Lys | Asp | Ala | Val | Ala | Phe | Thr | Cys | Glu | Pro | Glu | Xaa |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Gln | Asn | Thr | Thr | Tyr | Leu | Trp | Trp | Val | Asn | Gly | Gln | Ser | Leu | Pro | Val |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ser | Pro | Arg | Leu | Gln | Leu | Ser | Asn | Gly | Asn | Met | Thr | Leu | Thr | Leu | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Ser | Val | Lys | Arg | Asn | Asp | Ala | Gly | Ser | Tyr | Glu | Cys | Glu | Ile | Gln | Asn |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Ser | Ala | Asn | Arg | Ser | Asp | Pro | Val | Thr | Leu | Asn | Val | Leu | Tyr |
|     |     |     |     | 245 |     |     |     |     |     |     |     | 255 |     |     |     |
| Gly | Pro | Asp | Gly | Pro | Thr | Ile | Ser | Pro | Ser | Lys | Ala | Asn | Tyr | Arg | Pro |
|     |     |     |     | 260 |     |     |     |     |     |     |     | 270 |     |     |     |
| Gly | Glu | Asn | Leu | Asn | Leu | Ser | Cys | His | Ala | Ala | Ser | Asn | Pro | Pro | Ala |
|     |     |     |     | 275 |     |     |     |     |     |     |     | 285 |     |     |     |
| Gln | Tyr | Ser | Trp | Phe | Ile | Asn | Gly | Thr | Phe | Gln | Gln | Ser | Thr | Gln | Glu |
|     |     |     |     | 295 |     |     |     |     |     |     |     | 300 |     |     |     |
| Leu | Phe | Ile | Pro | Asn | Ile | Thr | Val | Asn | Asn | Ser | Gly | Ser | Tyr | Met | Cys |
| 305 |     |     |     | 310 |     |     |     |     |     |     |     | 315 |     |     |     |
| Gln | Ala | His | Asn | Ser | Ala | Thr | Gly | Leu | Asn | Arg | Thr | Thr | Val | Thr | Met |
|     |     |     |     | 325 |     |     |     |     |     |     |     | 335 |     |     |     |
| Ile | Thr | Val | Ser | Gly | Ser | Ala | Pro | Val | Leu | Ser | Ala | Val | Ala | Thr | Val |
|     |     |     |     | 340 |     |     |     |     |     |     |     | 350 |     |     |     |
| Gly | Ile | Thr | Ile | Gly | Val | Leu | Ala | Arg | Val | Ala | Leu | Ile |     |     |     |
|     |     |     |     | 355 |     |     |     |     |     |     |     | 365 |     |     |     |
|     |     |     |     | 360 |     |     |     |     |     |     |     |     |     |     |     |

Cys Lys Gly Arg Arg Arg Asn Pro Asp Ala Ala Ser Glu Val Gln Ala  
35 40 45

## 5176

His Leu Val Asn Met His Cys His Glu Phe Leu Pro Asp Val Leu Leu  
 50 55 60

Phe Ser Phe Thr Tyr Ser Phe Asp Gln Ile Val Cys Gly Leu Asn Lys  
 65 70 75 80

Met Lys Ile Ser Ser Pro Leu Phe Leu Gly Asn Thr Leu  
 85 90

<210> 5887  
 <211> 82  
 <212> PRT  
 <213> Homo sapiens

<400> 5887  
 Leu Cys Glu Lys Trp Ala Gln Trp Pro Ser Pro Glu Ile Ser Phe Ile  
 1 5 10 15

Leu Gly Gln Glu Phe Asp Glu Val Thr Ala Asp Asp Arg Lys Val Lys  
 20 25 30

Ser Thr Ile Thr Leu Asp Gly Gly Val Leu Val His Val Gln Lys Trp  
 35 40 45

Asp Gly Lys Ser Thr Thr Ile Lys Arg Lys Arg Glu Asp Asp Lys Leu  
 50 55 60

Val Val Glu Cys Val Met Lys Gly Val Thr Ser Thr Arg Val Tyr Glu  
 65 70 75 80

Arg Ala

<210> 5888  
 <211> 102  
 <212> PRT  
 <213> Homo sapiens

<400> 5888  
 Asp Leu His Ser Gln Trp Gly Thr Trp Pro Pro Ile Leu Gly Asp Leu  
 1 5 10 15

Arg Lys Arg Thr Ser Pro Trp Gly Glu Gly Trp Val Gly Pro Glu Gly  
 20 25 30

Pro Val Pro Ser Ser Val Leu Arg Gly Arg Ala Thr Cys Ser Asn Gly  
 35 40 45

## 5177

Ile Cys Ile Leu Ala Pro Leu His Leu Leu Ser Pro Ala Glu Ser Phe  
 50 55 60

Pro Ser Lys Pro Lys Ser Cys His Cys Phe Phe Leu Pro Gly Lys Asn  
 65 70 75 80

Ala Trp Thr Leu Pro Gly Asp Arg Leu Lys Pro Glu Gln Cys His Thr  
 85 90 95

Leu Ala Leu Ile Pro Cys  
 100

<210> 5889  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<400> 5889  
 Tyr Pro Leu Phe Thr Ile Met Leu Phe Glu Thr Lys Val Thr Met Tyr  
 1 5 10 15

Thr Ile Leu Leu Glu Glu Val Phe Asp Arg Lys Ser Asn Ile Met Ser  
 20 25 30

Phe Ile Asn Phe Leu Val Leu Lys Lys Ala Val Ile Tyr Ile Tyr Lys  
 35 40 45

Leu Cys Lys  
 50

<210> 5890  
 <211> 239  
 <212> PRT  
 <213> Homo sapiens

<400> 5890  
 Glu Tyr Gly Ser Pro Ser Val Ile Ser Val Ser Lys Gly Ser Pro Asp  
 1 5 10 15

Gly Ser His Pro Val Val Val Ala Pro Tyr Asn Gly Gly Pro Pro Arg  
 20 25 30

Thr Cys Pro Lys Ile Lys Gln Glu Ala Val Ser Ser Cys Thr His Leu  
 35 40 45

Gly Ala Gly Pro Pro Leu Ser Asn Gly His Arg Pro Ala Ala His Asp

## 5178

50                                      55                                      60  
 Phe Pro Leu Gly Arg Gln Leu Pro Ser Arg Thr Thr Pro Thr Leu Gly  
 65                                      70                                      75                                      80  
 Leu Glu Glu Val Leu Ser Ser Arg Asp Cys His Pro Ala Leu Pro Leu  
                                     85                                      90                                      95  
 Pro Pro Gly Phe His Pro His Pro Gly Pro Asn Tyr Pro Ser Phe Leu  
                                     100                                      105                                      110  
 Pro Asp Gln Met Gln Pro Gln Val Pro Pro Leu His Tyr Gln Glu Leu  
                                     115                                      120                                      125  
 Met Pro Pro Gly Ser Cys Met Pro Glu Glu Pro Lys Pro Lys Arg Gly  
                                     130                                      135                                      140  
 Arg Arg Ser Trp Pro Arg Lys Arg Thr Ala Thr His Thr Cys Asp Tyr  
 145                                      150                                      155                                      160  
 Ala Gly Cys Gly Lys Thr Tyr Thr Lys Ser Ser His Leu Lys Ala His  
                                     165                                      170                                      175  
 Leu Arg Thr His Thr Gly Glu Lys Pro Tyr His Cys Asp Trp Asp Gly  
                                     180                                      185                                      190  
 Cys Gly Trp Lys Phe Ala Arg Ser Asp Glu Leu Thr Arg His Tyr Arg  
                                     195                                      200                                      205  
 Lys His Thr Gly His Arg Pro Phe Gln Cys Gln Lys Cys Asp Arg Ala  
                                     210                                      215                                      220  
 Phe Ser Arg Ser Asp His Leu Ala Leu His Met Lys Arg His Phe  
 225                                      230                                      235

&lt;210&gt; 5891

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5891

Leu Val Pro Asn Ser Ala Arg Val Gly Thr Arg Ser Lys Gly Val Cys  
 1                                      5                                      10                                      15  
 Val His Gly Asn Ala Glu Tyr Gln Pro Gly Ser Pro Val Tyr Ser Ser  
                                     20                                      25                                      30  
 Lys Cys Gln Asp Cys Val Cys Thr Asp Lys Val Asp Asn Asn Thr Leu  
                                     35                                      40                                      45

## 5179

Leu Asn Val Ile Ala Cys Thr His Val Pro Cys Asn Thr Ser Cys Ser  
 50 55 60  
 Pro Gly Phe Glu Leu Met Glu Ala Pro Gly Glu Cys Cys Lys Lys Cys  
 65 70 75 80  
 Glu Gln Thr His Cys Ile Ile Lys Arg Pro Asp Asn Gln His Val Ile  
 85 90 95  
 Leu Lys Pro Gly Asp Phe Lys Ser Asp Pro Lys Asn Asn Cys Thr Phe  
 100 105 110  
 Phe Ser Cys Val Lys Ile His Asn Gln Leu Ile Ser Ser Val Ser Asn  
 115 120 125  
 Ile Thr Cys Pro Asn Phe Asp Ala Ser Ile Cys Ile Pro Gly Ser Ile  
 130 135 140  
 Thr Phe Met Pro Asn Gly Cys Cys Lys Thr Cys Thr Pro Arg Asn Glu  
 145 150 155 160  
 Thr Arg Val Pro Cys Ser Thr Val Pro Val Thr Thr Glu Val Ser Tyr  
 165 170 175  
 Ala Gly Cys Thr Lys Thr Val Leu Met Asn His Cys Ser Gly Ser Cys  
 180 185 190  
 Gly Thr Phe Val Met Tyr Ser Ala Lys Ala Gln Ala Leu Asp His Ser  
 195 200 205  
 Cys Ser Cys Cys Lys Glu Glu Lys Thr Ser Gln Arg Glu Val Val Leu  
 210 215 220  
 Ser Cys Pro Asn Gly Gly Ser Leu Thr His Thr Tyr Thr His Ile Glu  
 225 230 235 240  
 Ser Cys Gln Cys Gln Asp Thr Val Cys Gly Leu Pro Thr Gly Thr Ser  
 245 250 255  
 Arg Arg Ala Arg Arg Ser Pro Arg His Leu Gly Ser Gly  
 260 265

&lt;210&gt; 5892

&lt;211&gt; 227

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;





## 5181

&lt;210&gt; 5893

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5893

Ser Ser His Phe Tyr Ala Lys Gln Glu Xaa Ser Ile Thr Leu Val Leu  
 1 5 10 15

Met Tyr Thr Leu His Phe Asp Lys Ile Asn Phe Val Val Ser Phe Glu  
 20 25 30

Val Asp Arg Cys Val Val Val Leu Leu His Phe Leu Leu Phe Cys Val  
 35 40 45

Trp Ser Cys Ile Pro Glu Thr Asn Glu Ala Leu Gly Tyr Phe Ile Lys  
 50 55 60

Cys Ser Asp Cys Gln Gln Arg Ala Gly Phe Leu Phe Leu Cys Cys Gly  
 65 70 75 80

Val Asn Arg Thr Met Val Trp Glu  
 85

&lt;210&gt; 5894

&lt;211&gt; 571

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5894

Arg Val Arg Ser Lys Val Pro Arg Cys Val Asn Thr Gln Pro Gly Phe  
 1 5 10 15

His Cys Leu Pro Cys Pro Pro Arg Tyr Arg Gly Asn Gln Pro Val Gly  
 20 25 30

Val Gly Leu Glu Ala Ala Lys Thr Glu Lys Gln Val Cys Glu Pro Glu  
 35 40 45

Asn Pro Cys Lys Asp Lys Thr His Asn Cys His Lys His Ala Glu Cys  
 50 55 60

Ile Tyr Leu Gly His Phe Ser Asp Pro Met Tyr Lys Cys Glu Cys Gln

## 5182

|   |     |    |     |    |     |     |
|---|-----|----|-----|----|-----|-----|
| 65  |     | 70 |     | 75 |     | 80  |
| Thr Gly Tyr Ala Gly Asp Gly Leu Ile Cys Gly Glu Asp Ser Asp Leu |     |    |     |    |     |     |
|   | 85  |    | 90  |    | 95  |     |
| Asp Gly Trp Pro Asn Leu Asn Leu Val Cys Ala Thr Asn Ala Thr Tyr |     |    |     |    |     |     |
|   | 100 |    | 105 |    | 110 |     |
| His Cys Ile Lys Asp Asn Cys Pro His Leu Pro Asn Ser Gly Gln Glu |     |    |     |    |     |     |
|   | 115 |    | 120 |    | 125 |     |
| Asp Phe Asp Lys Asp Gly Ile Gly Asp Ala Cys Asp Asp Asp Asp Asp |     |    |     |    |     |     |
|   | 130 |    | 135 |    | 140 |     |
| Asn Asp Gly Val Thr Asp Glu Lys Asp Asn Cys Gln Leu Leu Phe Asn |     |    |     |    |     |     |
|   | 145 |    | 150 |    | 155 | 160 |
| Pro Arg Gln Ala Asp Tyr Asp Lys Asp Glu Val Gly Asp Arg Cys Asp |     |    |     |    |     |     |
|   | 165 |    | 170 |    | 175 |     |
| Asn Cys Pro Tyr Val His Asn Pro Ala Gln Ile Asp Thr Asp Asn Asn |     |    |     |    |     |     |
|   | 180 |    | 185 |    | 190 |     |
| Gly Glu Gly Asp Ala Cys Ser Val Asp Ile Asp Gly Asp Asp Val Phe |     |    |     |    |     |     |
|   | 195 |    | 200 |    | 205 |     |
| Asn Glu Arg Asp Asn Cys Pro Tyr Val Tyr Asn Thr Asp Gln Arg Asp |     |    |     |    |     |     |
|   | 210 |    | 215 |    | 220 |     |
| Thr Asp Gly Asp Gly Val Gly Asp His Cys Asp Asn Cys Pro Leu Val |     |    |     |    |     |     |
|   | 225 |    | 230 |    | 235 | 240 |
| His Asn Pro Asp Gln Thr Asp Val Asp Asn Asp Leu Val Gly Asp Gln |     |    |     |    |     |     |
|   | 245 |    | 250 |    | 255 |     |
| Cys Asp Asn Asn Glu Asp Ile Asp Asp Asp Gly His Gln Asn Asn Gln |     |    |     |    |     |     |
|   | 260 |    | 265 |    | 270 |     |
| Asp Asn Cys Pro Tyr Ile Ser Asn Ala Asn Gln Ala Asp His Asp Arg |     |    |     |    |     |     |
|   | 275 |    | 280 |    | 285 |     |
| Asp Gly Gln Gly Asp Ala Cys Asp Pro Asp Asp Asp Asn Asp Gly Val |     |    |     |    |     |     |
|   | 290 |    | 295 |    | 300 |     |
| Pro Asp Asp Arg Asp Asn Cys Arg Leu Val Phe Asn Pro Asp Gln Glu |     |    |     |    |     |     |
|   | 305 |    | 310 |    | 315 | 320 |
| Asp Leu Asp Gly Asp Gly Arg Gly Asp Ile Cys Lys Asp Asp Phe Asp |     |    |     |    |     |     |
|   | 325 |    | 330 |    | 335 |     |
| Asn Asp Asn Ile Pro Asp Ile Asp Asp Val Cys Pro Glu Asn Asn Ala |     |    |     |    |     |     |

## 5183

|   |     |     |
|---|-----|-----|
| 340   | 345 | 350 |
| Ile Ser Glu Thr Asp Phe Arg Asn Phe Gln Met Val Pro Leu Asp Pro |     |     |
| 355   | 360 | 365 |
| Lys Gly Thr Thr Gln Ile Asp Pro Asn Trp Val Ile Arg His Gln Gly |     |     |
| 370   | 375 | 380 |
| Lys Glu Leu Val Gln Thr Ala Asn Ser Asp Pro Gly Ile Ala Val Gly |     |     |
| 385   | 390 | 395 |
| Phe Asp Glu Phe Gly Ser Val Asp Phe Ser Gly Thr Phe Tyr Val Asn |     |     |
| 405   | 410 | 415 |
| Thr Asp Arg Asp Asp Asp Tyr Ala Gly Phe Val Phe Gly Tyr Gln Ser |     |     |
| 420   | 425 | 430 |
| Ser Ser Arg Phe Tyr Val Val Met Trp Lys Gln Val Thr Gln Thr Tyr |     |     |
| 435   | 440 | 445 |
| Trp Glu Asp Gln Pro Thr Arg Ala Tyr Gly Tyr Ser Gly Val Ser Leu |     |     |
| 450   | 455 | 460 |
| Lys Val Val Asn Ser Thr Thr Gly Thr Gly Glu His Leu Arg Asn Ala |     |     |
| 465   | 470 | 475 |
| Leu Trp His Thr Gly Asn Thr Pro Gly Gln Val Arg Thr Leu Trp His |     |     |
| 485   | 490 | 495 |
| Asp Pro Arg Asn Ile Gly Trp Lys Asp Tyr Thr Ala Tyr Arg Trp His |     |     |
| 500   | 505 | 510 |
| Leu Thr His Arg Pro Lys Thr Gly Tyr Ile Arg Val Leu Val His Glu |     |     |
| 515   | 520 | 525 |
| Gly Lys Gln Val Met Ala Asp Ser Gly Pro Ile Tyr Asp Gln Thr Tyr |     |     |
| 530   | 535 | 540 |
| Ala Gly Gly Arg Leu Gly Leu Phe Val Phe Ser Gln Glu Met Val Tyr |     |     |
| 545   | 550 | 555 |
| Phe Ser Asp Leu Lys Tyr Glu Cys Arg Asp Ile                     |     |     |
| 565   | 570 |     |

&lt;210&gt; 5895

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5184

&lt;400&gt; 5895

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Asn Phe Leu Asn Glu Met Ile Asn Arg Trp Asn Leu Lys Tyr Ile Leu
 1             5             10             15

Leu Gln Lys Arg Phe Leu Ser Leu Leu Tyr Phe Asp Asp Cys Phe Leu
          20             25             30

Lys Ile Lys Ile Cys Ser Cys Ser Phe Ile Arg Leu Phe Lys Leu Cys
          35             40             45

Phe Pro Leu Ile Phe Phe His His Cys Ile Tyr
          50             55

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&lt;210&gt; 5896

&lt;211&gt; 176

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5896

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Arg Pro Thr Arg Pro Ser Arg Asp Cys Glu Gly Glu Arg Ser Lys Pro
 1             5             10             15

Arg Arg Arg Trp Lys Gly Trp Arg Thr His Leu Asn Met Trp Asn Pro
          20             25             30

Asn Ala Gly Gln Pro Gly Pro Asn Pro Tyr Pro Pro Asn Ile Gly Cys
          35             40             45

Pro Gly Gly Ser Asn Pro Ala His Pro Pro Pro Ile Asn Pro Pro Phe
          50             55             60

Pro Pro Gly Pro Cys Pro Pro Pro Pro Gly Ala Pro His Gly Asn Pro
          65             70             75             80

Ala Phe Pro Pro Gly Gly Pro Pro His Pro Val Pro Gln Pro Gly Tyr
          85             90             95

Pro Gly Cys Gln Pro Leu Gly Pro Tyr Pro Pro Pro Tyr Pro Pro Pro
          100             105             110

Ala Pro Gly Ile Pro Pro Val Asn Pro Leu Ala Pro Gly Met Val Gly
          115             120             125

Pro Ala Val Ile Val Asp Lys Lys Met Gln Lys Lys Met Lys Lys Ala
          130             135             140

His Lys Lys Met His Lys His Gln Lys His His Lys Tyr His Lys His
          145             150             155             160

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## 5185

Gly Lys His Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Asp Ser Asp  
 165 170 175

<210> 5897

<211> 205

<212> PRT

<213> Homo sapiens

<400> 5897

Leu Gly Gly Cys Arg Asp Val Pro Ser Leu Thr Leu Leu Ser Thr Val  
 1 5 10 15

Ala Gly Ala Leu Ile Ala Asp Phe Leu Ser Gly Leu Val His Trp Gly  
 20 25 30

Ala Asp Thr Trp Gly Ser Val Glu Leu Pro Ile Val Gly Lys Ala Phe  
 35 40 45

Ile Arg Pro Phe Arg Glu His His Ile Asp Pro Thr Ala Ile Thr Arg  
 50 55 60

His Asp Phe Ile Glu Thr Asn Gly Asp Asn Cys Leu Val Thr Leu Leu  
 65 70 75 80

Pro Leu Leu Asn Met Ala Tyr Lys Phe Arg Thr His Ser Pro Glu Ala  
 85 90 95

Leu Glu Gln Leu Tyr Pro Trp Glu Cys Phe Val Phe Cys Leu Ile Ile  
 100 105 110

Phe Gly Thr Phe Thr Asn Gln Ile His Lys Trp Ser His Thr Tyr Phe  
 115 120 125

Gly Leu Pro Arg Trp Val Thr Leu Leu Gln Asp Trp His Val Ile Leu  
 130 135 140

Pro Arg Lys His His Arg Ile His His Val Ser Pro His Glu Thr Tyr  
 145 150 155 160

Phe Cys Ile Thr Thr Gly Trp Leu Asn Tyr Pro Leu Glu Lys Ile Gly  
 165 170 175

Phe Trp Arg Arg Leu Glu Asp Leu Ile Gln Gly Leu Thr Gly Glu Lys  
 180 185 190

Pro Arg Ala Asp Asp Met Lys Trp Ala Gln Lys Ile Lys

## 5186

195

200

205

&lt;210&gt; 5898

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (84)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (85)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5898

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Trp | Leu | Leu | Val | Asn | Phe | Asp | Cys | Ser | Ala | Met | Trp | Val | Lys | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Asp | Leu | Thr | Gly | Ala | Phe | Arg | Leu | Asp | Pro | Thr | Tyr | Leu | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ser | His | Gln | Asp | Ser | Gly | Leu | Ile | Thr | Asp | Tyr | Arg | His | Trp | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Leu | Gly | Arg | Arg | Phe | Arg | Ser | Leu | Lys | Met | Trp | Phe | Val | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Met | Tyr | Gly | Val | Lys | Gly | Leu | Gln | Ala | Tyr | Ile | Arg | Lys | His | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Ser | Xaa | Xaa | Phe | Glu | Ser | Leu | Val | Arg | Gln | Gly | Ser | Pro | Leu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

&lt;210&gt; 5899

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

## 5187

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5899

Leu Xaa His Pro Phe Ala Val Thr Ser Tyr Gly Lys Asn Leu Tyr Phe

1

5

10

15

Thr Asp Trp Lys Met Asn Ser Val Val Ala Leu Asp Leu Ala Ile Ser

20

25

30

Lys Glu Thr Asp Ala Phe Gln Pro His Lys Gln Thr Arg Leu Tyr Gly

35

40

45

Ile Thr Thr Ala Leu Ser Gln Cys Pro Gln Gly His Asn Tyr Cys Ser

50

55

60

Val Asn Asn Gly Gly Cys Thr His Leu Cys Leu Ala Thr Pro Gly Ser

65

70

75

80

Arg Thr Cys Arg Cys Pro Asp Asn Thr Leu Gly Val Asp Cys Ile Glu

85

90

95

Gln Lys

<210> 5900

<211> 48

<212> PRT

<213> Homo sapiens

<400> 5900

Glu Ile Ser Ala Phe Leu Ile Ser Ser Asn Tyr Lys Arg Thr Ala Val

1

5

10

15

Phe Phe His Thr His Leu Pro Glu Gly Arg Ile Gly Ser His Ile Tyr

20

25

30

Val Tyr Glu Arg Lys Leu Lys Gly Lys Phe Asn Met Lys Met Lys Phe

35

40

45

<210> 5901

<211> 87

<212> PRT

<213> Homo sapiens



## 5188

<220>  
 <221> SITE  
 <222> (10)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (36)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (47)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5901  
 Ser Ser Leu Gly Lys Leu Asp His Gln Xaa Phe Ser Leu Asp Arg Val  
 1 5 10 15  
 Ser Leu Val Asn Lys Gly Asp Thr Gly Asn Pro Glu Trp Thr Val Ile  
 20 25 30  
 Cys Val Gly Xaa His Ser Gly Ser Gly Ala Ser Asp Thr Leu Xaa Pro  
 35 40 45  
 Lys Thr Ala Pro Ser Phe Arg Leu Ala Tyr Glu Met Met Phe Met Cys  
 50 55 60  
 Phe Leu Glu Thr Arg Trp Lys Glu Arg Gly Arg Ile Asn Phe Leu Ile  
 65 70 75 80  
 Leu Leu Leu Leu Asn Val Met  
 85

<210> 5902  
 <211> 83  
 <212> PRT  
 <213> Homo sapiens

<400> 5902  
 Leu Asn Trp Leu Leu Gln Gly Glu Gly Gln Lys Ala Arg Pro Ser Ala  
 1 5 10 15  
 Leu Glu Ser Arg Pro Glu Val Ser Gly Lys Leu Thr Leu Lys Met Asp  
 20 25 30  
 Thr Pro Gln Pro Ala Leu Pro Phe Gly Leu Pro Arg Ile Ser Phe Ser  
 35 40 45

## 5189

Gly Cys Ser His Thr Cys Ala Ile Thr Ser Ser Ser Met Thr Trp Thr  
 50 55 60

Gly Thr Ser Leu Thr Ile Pro Ile Gly Ile Thr Arg Ala Thr Asn Tyr  
 65 70 75 80

Ala Val Phe

<210> 5903

<211> 269

<212> PRT

<213> Homo sapiens

<400> 5903

Arg Arg Cys Cys His Ser Ala Thr Met Phe Glu Ala Arg Leu Val Gln  
 1 5 10 15

Gly Ser Ile Leu Lys Lys Val Leu Glu Ala Leu Lys Asp Leu Ile Asn  
 20 25 30

Glu Ala Cys Trp Asp Ile Ser Ser Ser Gly Val Asn Leu Gln Ser Met  
 35 40 45

Asp Ser Ser His Val Ser Leu Val Gln Leu Thr Leu Arg Ser Glu Gly  
 50 55 60

Phe Asp Thr Tyr Arg Cys Asp Arg Asn Leu Ala Met Gly Val Asn Leu  
 65 70 75 80

Thr Ser Met Ser Lys Ile Leu Lys Cys Ala Gly Asn Glu Asp Ile Ile  
 85 90 95

Thr Leu Arg Ala Glu Asp Asn Ala Asp Thr Leu Ala Leu Val Phe Glu  
 100 105 110

Ala Pro Asn Gln Glu Lys Val Ser Asp Tyr Glu Met Lys Leu Met Asp  
 115 120 125

Leu Asp Val Glu Gln Leu Gly Ile Pro Glu Gln Glu Tyr Ser Cys Val  
 130 135 140

Val Lys Met Pro Ser Gly Glu Phe Ala Arg Ile Cys Arg Asp Leu Ser  
 145 150 155 160

His Ile Gly Asp Ala Val Val Ile Ser Cys Ala Lys Asp Gly Val Lys  
 165 170 175

Phe Ser Ala Ser Gly Glu Leu Gly Asn Gly Asn Ile Lys Leu Ser Gln

## 5190

|   |     |     |
|---|-----|-----|
| 180   | 185 | 190 |
| Thr Ser Asn Val Asp Lys Glu Glu Glu Ala Val Thr Ile Glu Met Asn |     |     |
| 195   | 200 | 205 |
| Glu Pro Val Gln Leu Thr Phe Ala Leu Arg Tyr Leu Asn Phe Phe Thr |     |     |
| 210   | 215 | 220 |
| Lys Ala Thr Pro Leu Ser Ser Thr Val Thr Leu Ser Met Ser Ala Asp |     |     |
| 225   | 230 | 235 |
| Val Pro Leu Val Val Glu Tyr Lys Ile Ala Asp Met Gly His Leu Lys |     |     |
| 245   | 250 | 255 |
| Tyr Tyr Leu Ala Pro Lys Ile Glu Asp Glu Glu Gly Ser             |     |     |
| 260   | 265 |     |

&lt;210&gt; 5904

&lt;211&gt; 211

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5904

|   |     |     |
|---|-----|-----|
| Asn Lys Met Lys Lys Val Arg Leu Lys Glu Leu Glu Ser Arg Leu Gln |     |     |
| 1   | 5   | 10  |
| Gln Val Asp Gly Phe Glu Lys Pro Lys Leu Leu Leu Glu Gln Tyr Pro |     |     |
| 20  | 25  | 30  |
| Thr Arg Pro His Ile Ala Ala Cys Met Leu Tyr Thr Ile His Asn Thr |     |     |
| 35  | 40  | 45  |
| Tyr Asp Asp Ile Glu Asn Lys Val Val Ala Asp Leu Gly Cys Gly Cys |     |     |
| 50  | 55  | 60  |
| Gly Val Leu Ser Ile Gly Thr Ala Met Leu Gly Ala Gly Leu Cys Val |     |     |
| 65  | 70  | 75  |
| Gly Phe Asp Ile Asp Glu Asp Ala Leu Glu Ile Phe Asn Arg Asn Ala |     |     |
| 85  | 90  | 95  |
| Glu Glu Phe Glu Leu Thr Asn Ile Asp Met Val Gln Cys Asp Val Cys |     |     |
| 100   | 105 | 110 |
| Leu Leu Ser Asn Arg Met Ser Lys Ser Phe Asp Thr Val Ile Met Asn |     |     |
| 115   | 120 | 125 |
| Pro Pro Phe Gly Thr Lys Asn Asn Lys Gly Thr Asp Met Ala Phe Leu |     |     |
| 130   | 135 | 140 |

## 5191

Lys Thr Ala Leu Glu Met Ala Arg Thr Ala Val Tyr Ser Leu His Lys  
 145 150 155 160

Ser Ser Thr Arg Glu His Val Gln Lys Lys Ala Ala Glu Trp Lys Ile  
 165 170 175

Lys Ile Asp Ile Ile Ala Glu Leu Arg Tyr Asp Leu Pro Ala Ser Tyr  
 180 185 190

Lys Phe His Lys Lys Lys Ser Val Asp Ile Glu Val Asp Leu Ile Arg  
 195 200 205

Phe Ser Phe  
 210

<210> 5905

<211> 77

<212> PRT

<213> Homo sapiens

<400> 5905

Lys Phe Leu Leu Lys Val Asn Phe Pro Glu Asn Gly Phe Leu Ser Pro  
 1 5 10 15

Asp Lys Leu Ser Leu Leu Glu Lys Leu Leu Pro Glu Arg Lys Glu Val  
 20 25 30

Glu Glu Thr Asp Glu Met Asp Gln Val Glu Leu Val Asp Phe Asp Pro  
 35 40 45

Asn Gln Glu Arg Arg Arg His Tyr Asn Gly Glu Ala Tyr Glu Asp Asp  
 50 55 60

Glu His His Pro Arg Gly Gly Val Gln Cys Gln Thr Ser  
 65 70 75

<210> 5906

<211> 142

<212> PRT

<213> Homo sapiens

<400> 5906

Ser Trp Glu Thr Glu Lys Met Gln Thr Ala Gly Ala Leu Phe Ile Ser  
 1 5 10 15

Pro Ala Leu Ile Arg Cys Cys Thr Arg Gly Leu Ile Arg Pro Val Ser

## 5192

|   |     |    |     |    |     |
|---|-----|----|-----|----|-----|
|   | 20  |    | 25  |    | 30  |
| Ala Ser Phe Leu Asn Ser Pro Val Asn Ser Ser Lys Gln Pro Ser Tyr |     |    |     |    |     |
|   | 35  |    | 40  |    | 45  |
| Ser Asn Phe Pro Leu Gln Val Ala Arg Arg Glu Phe Gln Thr Ser Val |     |    |     |    |     |
|   | 50  |    | 55  |    | 60  |
| Val Ser Arg Asp Ile Asp Thr Ala Ala Lys Phe Ile Gly Ala Gly Ala |     |    |     |    |     |
|   | 65  |    | 70  |    | 75  |
| Ala Thr Val Gly Val Ala Gly Ser Gly Ala Gly Ile Gly Thr Val Phe |     |    |     |    |     |
|   |     | 85 |     | 90 | 95  |
| Gly Ser Leu Ile Ile Gly Tyr Ala Arg Asn Pro Ser Leu Lys Gln Gln |     |    |     |    |     |
|   | 100 |    | 105 |    | 110 |
| Leu Phe Ser Tyr Ala Ile Leu Gly Phe Ala Leu Ser Glu Ala Met Gly |     |    |     |    |     |
|   | 115 |    | 120 |    | 125 |
| Leu Phe Cys Leu Met Val Ala Phe Leu Ile Leu Phe Ala Met         |     |    |     |    |     |
|   | 130 |    | 135 |    | 140 |

&lt;210&gt; 5907

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (36)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5907

|   |
|---|
| Thr Cys Pro Phe Leu Gln Glu Phe Ser Leu Gly Met Trp Ser Cys Leu |
| 1 5 10 15   |

|   |
|---|
| His Ala Val Leu Glu Leu Ile Asp Ser Gln Gln Gln Asp Arg Tyr Trp |
| 20 25 30  |

|   |
|---|
| Cys Pro Pro Xaa Leu His Arg Ala Ala Ile Ala Phe Leu His Ala Leu |
| 35 40 45  |

|   |
|---|
| Trp Gln Asp Arg Arg Asp Ser Ala Met Leu Val Leu Arg Thr Lys |
| 50 55 60  |

&lt;210&gt; 5908

## 5193

<211> 61  
 <212> PRT  
 <213> Homo sapiens

<400> 5908  
 Arg Asn Lys Gly Val Arg Ala Asn Ile Gln Gln Leu Leu Ser Pro Val  
 1 5 10 15  
 Met Lys Phe Ile Gln Thr Lys Asp Gly Met Ser Leu Tyr Ile Ile Pro  
 20 25 30  
 Cys Asn Lys Tyr Ser Val Lys Leu Cys Trp Cys Asn Leu Thr Cys Phe  
 35 40 45  
 Cys Gln Ser Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
 50 55 60

<210> 5909  
 <211> 466  
 <212> PRT  
 <213> Homo sapiens

<400> 5909  
 Val Ser Pro Arg Ala Gly Gly Ala Gly Asn Asn Arg Gly Arg Ala His  
 1 5 10 15  
 Arg Ala Ser Ser Cys Ser Leu Pro Ala Pro Pro Ala Thr Leu Asp Pro  
 20 25 30  
 Arg Ile Pro Pro Ala Arg Leu Pro Ala Met Ala Asp Lys Glu Ala Ala  
 35 40 45  
 Phe Asp Asp Ala Val Glu Glu Arg Val Ile Asn Glu Glu Tyr Lys Ile  
 50 55 60  
 Trp Lys Lys Asn Thr Pro Phe Leu Tyr Asp Leu Val Met Thr His Ala  
 65 70 75 80  
 Leu Glu Trp Pro Ser Leu Thr Ala Gln Trp Leu Pro Asp Val Thr Arg  
 85 90 95  
 Pro Glu Gly Lys Asp Phe Ser Ile His Arg Leu Val Leu Gly Thr His  
 100 105 110  
 Thr Ser Asp Glu Gln Asn His Leu Val Ile Ala Ser Val Gln Leu Pro  
 115 120 125  
 Asn Asp Asp Ala Gln Phe Asp Ala Ser His Tyr Asp Ser Glu Lys Gly  
 130 135 140

## 5194

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Phe | Gly | Gly | Phe | Gly | Ser | Val | Ser | Gly | Lys | Ile | Glu | Ile | Glu | Ile | 145 | 150 | 155 | 160 |
| Lys | Ile | Asn | His | Glu | Gly | Glu | Val | Asn | Arg | Ala | Arg | Tyr | Met | Pro | Gln | 165 | 170 | 175 |     |
| Asn | Pro | Cys | Ile | Ile | Ala | Thr | Lys | Thr | Pro | Ser | Ser | Asp | Val | Leu | Val | 180 | 185 | 190 |     |
| Phe | Asp | Tyr | Thr | Lys | His | Pro | Ser | Lys | Pro | Asp | Pro | Ser | Gly | Glu | Cys | 195 | 200 | 205 |     |
| Asn | Pro | Asp | Leu | Arg | Leu | Arg | Gly | His | Gln | Lys | Glu | Gly | Tyr | Gly | Leu | 210 | 215 | 220 |     |
| Ser | Trp | Asn | Pro | Asn | Leu | Ser | Gly | His | Leu | Leu | Ser | Ala | Ser | Asp | Asp | 225 | 230 | 235 | 240 |
| His | Thr | Ile | Cys | Leu | Trp | Asp | Ile | Ser | Ala | Val | Pro | Lys | Glu | Gly | Lys | 245 | 250 | 255 |     |
| Val | Val | Asp | Ala | Lys | Thr | Ile | Phe | Thr | Gly | His | Thr | Ala | Val | Val | Glu | 260 | 265 | 270 |     |
| Asp | Val | Ser | Trp | His | Leu | Leu | His | Glu | Ser | Leu | Phe | Gly | Ser | Val | Ala | 275 | 280 | 285 |     |
| Asp | Asp | Gln | Lys | Leu | Met | Ile | Trp | Asp | Thr | Arg | Ser | Asn | Asn | Thr | Ser | 290 | 295 | 300 |     |
| Lys | Pro | Ser | His | Ser | Val | Asp | Ala | His | Thr | Ala | Glu | Val | Asn | Cys | Leu | 305 | 310 | 315 | 320 |
| Ser | Phe | Asn | Pro | Tyr | Ser | Glu | Phe | Ile | Leu | Ala | Thr | Gly | Ser | Ala | Asp | 325 | 330 | 335 |     |
| Lys | Thr | Val | Ala | Leu | Trp | Asp | Leu | Arg | Asn | Leu | Lys | Leu | Lys | Leu | His | 340 | 345 | 350 |     |
| Ser | Phe | Glu | Ser | His | Lys | Asp | Glu | Ile | Phe | Gln | Val | Gln | Trp | Ser | Pro | 355 | 360 | 365 |     |
| His | Asn | Glu | Thr | Ile | Leu | Ala | Ser | Ser | Gly | Thr | Asp | Arg | Arg | Leu | Asn | 370 | 375 | 380 |     |
| Val | Trp | Asp | Leu | Ser | Lys | Ile | Gly | Glu | Glu | Gln | Ser | Pro | Glu | Asp | Ala | 385 | 390 | 395 | 400 |
| Glu | Asp | Gly | Pro | Pro | Glu | Leu | Leu | Phe | Ile | His | Gly | Gly | His | Thr | Ala | 405 | 410 | 415 |     |

## 5195

Lys Ile Ser Asp Phe Ser Trp Asn Pro Asn Glu Pro Trp Val Ile Cys  
                   420                  425                  430

Ser Val Ser Glu Asp Asn Ile Met Gln Val Trp Gln Met Ala Glu Asn  
                   435                  440                  445

Ile Tyr Asn Asp Glu Asp Pro Glu Gly Ser Val Asp Pro Glu Gly Gln  
                   450                  455                  460

Gly Ser  
 465

<210> 5910

<211> 67

<212> PRT

<213> Homo sapiens

<400> 5910

Leu Leu Pro His Pro Phe Ser Cys Val His Val Ala Phe Ser Asn Pro  
   1                  5                  10                  15

Gly Gln Trp Phe Leu Pro Arg Pro Cys Thr Glu Ala Gly Cys Leu Pro  
                   20                  25                  30

Asp Pro Arg Arg Val Arg Glu Gly Arg Gly Ile Leu Leu Leu Glu Leu  
                   35                  40                  45

Gln Ala Leu Ala Glu Ala Val Ser His Thr Val Val Ser Ser Ala Trp  
                   50                  55                  60

Ala Gly Thr  
 65

<210> 5911

<211> 212

<212> PRT

<213> Homo sapiens

<400> 5911

Glu Ile Ile Thr Asp Arg Gln Ser Gly Lys Lys Arg Gly Phe Gly Phe  
   1                  5                  10                  15

Val Thr Phe Asp Asp His Asp Pro Val Asp Lys Ile Val Leu Gln Lys  
                   20                  25                  30

Tyr His Thr Ile Asn Gly His Asn Ala Glu Val Arg Lys Ala Leu Ser



## 5196

35 40 45  
 Arg Gln Glu Met Gln Glu Val Gln Ser Ser Arg Ser Gly Arg Gly Gly  
 50 55 60  
 Asn Phe Gly Phe Gly Asp Ser Arg Gly Gly Gly Gly Asn Phe Gly Pro  
 65 70 75 80  
 Gly Pro Gly Ser Asn Phe Arg Gly Gly Ser Asp Gly Tyr Gly Ser Gly  
 85 90 95  
 Arg Gly Phe Gly Asp Gly Tyr Asn Gly Tyr Gly Gly Gly Pro Gly Gly  
 100 105 110  
 Gly Asn Phe Gly Gly Ser Pro Gly Tyr Gly Gly Gly Arg Gly Gly Tyr  
 115 120 125  
 Gly Gly Gly Gly Pro Gly Tyr Gly Asn Gln Gly Gly Gly Tyr Gly Gly  
 130 135 140  
 Gly Tyr Asp Asn Tyr Gly Gly Gly Asn Tyr Gly Ser Gly Asn Tyr Asn  
 145 150 155 160  
 Asp Phe Gly Asn Tyr Asn Gln Gln Pro Ser Asn Tyr Gly Pro Met Lys  
 165 170 175  
 Ser Gly Asn Phe Gly Gly Ser Arg Asn Met Gly Gly Pro Tyr Gly Gly  
 180 185 190  
 Gly Asn Tyr Gly Pro Gly Gly Ser Gly Gly Ser Gly Gly Tyr Gly Gly  
 195 200 205  
 Arg Ser Arg Tyr  
 210

&lt;210&gt; 5912

&lt;211&gt; 385

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5912

His Leu Glu Pro Ala Gln Leu Val Ser Lys Lys His Lys Leu Arg Ser  
 1 5 10 15  
 Gln Lys Arg Pro Arg Arg Cys Leu Trp Leu His Gln Ser Ser Arg Arg  
 20 25 30  
 Thr Trp Leu Gly Pro Arg Arg Gly His Pro Leu Cys Arg Cys Pro Pro  
 35 40 45

## 5197

Arg Arg Pro Trp Leu Trp Leu Asp Arg Ser Gln Lys Leu Thr Ser Ser  
 50 55 60  
 Ala Ser Ser Pro Ser Gln Pro Tyr Ser Val Gln Pro Leu His Leu Pro  
 65 70 75 80  
 Asp Gly Trp Ala Asp Pro Ala Gly Leu Arg Leu Arg Gly Val Phe Leu  
 85 90 95  
 Cys Leu Pro Arg Val Leu Gln Arg Arg Cys Pro Pro Gly Val Pro Asn  
 100 105 110  
 Thr Ser Arg Ala Val Gln Glu Ala Ser Gly Arg Gly Arg Ala Ala Arg  
 115 120 125  
 His Arg Asn Ser Leu Gln Arg Pro Cys Ser Arg Ser Gln Ser Pro Gly  
 130 135 140  
 Gly Glu Glu Gly Met Ala Arg Ala Tyr Ala Val Val Cys Asp Cys Lys  
 145 150 155 160  
 Leu Phe Leu Tyr Asp Leu Pro Glu Gly Lys Ser Thr Gln Pro Gly Val  
 165 170 175  
 Ile Ala Ser Gln Val Leu Asp Leu Arg Asp Asp Glu Phe Ser Val Ser  
 180 185 190  
 Ser Val Leu Ala Ser Asp Val Ile His Ala Thr Arg Arg Asp Ile Pro  
 195 200 205  
 Cys Ile Phe Arg Val Thr Ala Ser Leu Leu Gly Ala Pro Ser Lys Thr  
 210 215 220  
 Ser Ser Leu Leu Ile Leu Thr Glu Asn Glu Asn Glu Lys Arg Lys Trp  
 225 230 235 240  
 Val Gly Ile Leu Glu Gly Leu Gln Ser Ile Leu His Lys Asn Arg Leu  
 245 250 255  
 Arg Asn Gln Val Val His Val Pro Leu Glu Ala Tyr Asp Ser Ser Leu  
 260 265 270  
 Pro Leu Ile Lys Ala Ile Leu Thr Ala Ala Ile Val Asp Ala Asp Arg  
 275 280 285  
 Ile Ala Val Gly Leu Glu Glu Gly Leu Tyr Val Ile Glu Val Thr Arg  
 290 295 300  
 Asp Val Ile Val Arg Ala Ala Asp Cys Lys Lys Val His Gln Ile Glu  
 305 310 315 320

## 5198

Leu Ala Pro Arg Glu Lys Ile Val Ile Leu Leu Cys Gly Arg Asn His  
                           325                          330                          335

His Val His Leu Tyr Pro Trp Ser Ser Leu Asp Gly Ala Glu Gly Ser  
                           340                          345                          350

Phe Asp Ile Lys Leu Pro Glu Thr Lys Gly Cys Gln Leu Met Ala Thr  
                           355                          360                          365

Ala Thr Leu Lys Arg Asn Ser Gly Thr Cys Leu Phe Val Ala Val Lys  
                           370                          375                          380

Arg  
 385

<210> 5913

<211> 39

<212> PRT

<213> Homo sapiens

<400> 5913

Thr Gln Ser Lys Trp Arg Leu Glu Val Gln Cys Gly Lys Glu Lys Gln  
   1                          5                          10                          15

Val Phe Ile Glu Ser Thr Asn Ser Thr Pro Phe Ile Asp Thr Glu Asn  
                           20                          25                          30

Val Glu Asn Pro Lys Phe Asp  
                           35

<210> 5914

<211> 321

<212> PRT

<213> Homo sapiens

<400> 5914

Glu Arg Thr Leu Gly Gln Pro Gly Phe Leu Gly Cys Pro Arg Gln Pro  
   1                          5                          10                          15

His Thr Ala Met His Tyr Pro Thr Ala Leu Leu Phe Leu Ile Leu Ala  
                           20                          25                          30

Asn Gly Ala Gln Ala Phe Arg Ile Cys Ala Phe Asn Ala Gln Arg Leu  
                           35                          40                          45

Thr Leu Ala Lys Val Ala Arg Glu Gln Val Met Asp Thr Leu Val Arg

## 5199

| 50  | 55                                      | 60          |
|---|---|-------------|
| Ile Leu Ala Arg Cys Asp   | Ile Met Val Leu Gln Glu Val Val Asp Ser |             |
| 65  | 70                                      | 75 80       |
| Ser Gly Ser Ala Ile Pro Leu Leu Leu Arg Glu Leu Asn Arg Phe Asp |   |             |
|   | 85                                      | 90 95       |
| Gly Ser Gly Pro Tyr Ser Thr Leu Ser Ser Pro Gln Leu Gly Arg Ser |   |             |
|   | 100                                     | 105 110     |
| Thr Tyr Met Glu Thr Tyr Val Tyr Phe Tyr Arg Ser His Lys Thr Gln |   |             |
|   | 115                                     | 120 125     |
| Val Leu Ser Ser Tyr Val Tyr Asn Asp Glu Asp Asp Val Phe Ala Arg |   |             |
|   | 130                                     | 135 140     |
| Glu Pro Phe Val Ala Gln Phe Ser Leu Pro Ser Asn Val Leu Pro Ser |   |             |
|   | 145                                     | 150 155 160 |
| Leu Val Leu Val Pro Leu His Thr Thr Pro Lys Ala Val Glu Lys Glu |   |             |
|   | 165                                     | 170 175     |
| Leu Asn Ala Leu Tyr Asp Val Phe Leu Glu Val Ser Gln His Trp Gln |   |             |
|   | 180                                     | 185 190     |
| Ser Lys Asp Val Ile Leu Leu Gly Asp Phe Asn Ala Asp Cys Ala Ser |   |             |
|   | 195                                     | 200 205     |
| Leu Thr Lys Lys Arg Leu Asp Lys Leu Glu Leu Arg Thr Glu Pro Gly |   |             |
|   | 210                                     | 215 220     |
| Phe His Trp Val Ile Ala Asp Gly Glu Asp Thr Thr Val Arg Ala Ser |   |             |
|   | 225                                     | 230 235 240 |
| Thr His Cys Thr Tyr Asp Arg Val Val Leu His Gly Glu Arg Cys Arg |   |             |
|   | 245                                     | 250 255     |
| Ser Leu Leu His Thr Ala Ala Ala Phe Asp Phe Pro Thr Ser Phe Gln |   |             |
|   | 260                                     | 265 270     |
| Leu Thr Glu Glu Glu Ala Leu Asn Ile Ser Asp His Tyr Pro Val Glu |   |             |
|   | 275                                     | 280 285     |
| Val Glu Leu Lys Leu Ser Gln Ala His Ser Val Gln Pro Leu Ser Leu |   |             |
|   | 290                                     | 295 300     |
| Thr Val Leu Leu Leu Leu Ser Leu Leu Ser Pro Gln Leu Cys Pro Ala |   |             |
|   | 305                                     | 310 315 320 |
| Ala   |   |             |

## 5200

&lt;210&gt; 5915

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5915

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Cys | Leu | Ser | Leu | Pro | Ser | Ser | Trp | Glu | Asn | Arg | Pro | Val | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Pro | His | Arg | Ser | Ser | Phe | Cys | Ile | Phe | Ser | Arg | Asp | Gly | Val | Ser | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Cys | Trp | Pro | Gly | Trp | Ser |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 5916

&lt;211&gt; 359

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5916

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Asn | Leu | Glu | Glu | Val | Gly | Thr | Ile | Cys | Leu | Gly | Phe | Phe | Lys | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ser | Thr | Asn | Leu | Ser | Glu | Phe | Val | Met | Arg | Lys | Ile | Gly | Asp | Leu | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Cys | Ala | Asn | Ile | Gln | His | Leu | Ser | Ser | Arg | Ser | Leu | Val | Asn | Ile | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Lys | Met | Phe | Arg | Phe | Thr | His | Val | Asp | His | Ile | Asn | Phe | Met | Lys | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Ile | Gly | Glu | Ile | Ala | Pro | Gln | Arg | Ile | Pro | Ser | Leu | Gly | Val | Gln | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Val | Met | His | Leu | Thr | Leu | Tyr | Cys | Ser | Ala | Leu | Arg | Phe | Leu | Asn | Glu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Gly | Val | Met | Asn | Ala | Val | Ala | Ala | Ser | Leu | Pro | Pro | Arg | Val | Ala | His |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Cys | Arg | Ser | Lys | Asp | Val | Ala | Lys | Ile | Leu | Trp | Ser | Phe | Gly | Thr | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

## 5201

Asn Tyr Lys Pro Pro Asn Ala Glu Glu Phe Tyr Ser Ser Leu Ile Ser  
 130 135 140  
 Glu Ile His Arg Lys Met Pro Glu Phe Asn Gln Tyr Pro Glu His Leu  
 145 150 155 160  
 Pro Thr Cys Leu Leu Gly Leu Ala Phe Leu Glu Tyr Phe Pro Val Glu  
 165 170 175  
 Leu Ile Asp Phe Ala Leu Ser Pro Gly Phe Val Arg Leu Ala Gln Glu  
 180 185 190  
 Arg Thr Lys Phe Asp Leu Leu Lys Glu Leu Tyr Thr Leu Asp Gly Thr  
 195 200 205  
 Val Gly Ile Glu Cys Pro Asp Tyr Arg Gly Asn Arg Leu Ser Thr His  
 210 215 220  
 Leu Gln Gln Glu Gly Ser Glu Leu Leu Trp Tyr Leu Ala Glu Lys Asp  
 225 230 235 240  
 Met Asn Ser Lys Pro Glu Phe Leu Glu Thr Val Phe Leu Leu Glu Thr  
 245 250 255  
 Met Leu Gly Gly Pro Gln Tyr Val Lys His His Met Ile Leu Pro His  
 260 265 270  
 Thr Arg Ser Ser Asp Leu Glu Val Gln Leu Asp Val Asn Leu Lys Pro  
 275 280 285  
 Leu Pro Phe Asn Arg Glu Ala Thr Pro Ala Glu Asn Val Ala Lys Leu  
 290 295 300  
 Arg Leu Glu His Val Gly Val Ser Leu Thr Asp Asp Leu Met Asn Lys  
 305 310 315 320  
 Leu Leu Lys Gly Lys Ala Arg Gly His Phe Gln Gly Lys Thr Glu Ser  
 325 330 335  
 Glu Pro Gly Gln Gln Pro Trp Ser Trp Arg Ile Arg Gln Leu Tyr Leu  
 340 345 350  
 Trp Gly Ala Ser Phe Ala Met  
 355

&lt;210&gt; 5917

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5202

&lt;400&gt; 5917

Phe Gly Leu Phe Cys Thr Leu Tyr Lys Trp Thr His Ile Met Phe Ile  
 1 5 10 15

Phe Trp Val Cys Leu Leu Ser Phe Asn Ile Arg Phe Val Gly Ser Ser  
 20 25 30

Leu Leu Cys Val Val Leu Ser Cys Ser Leu Tyr Ser Val Pro Lys Tyr  
 35 40 45

Ser Ile Leu Gln Phe Thr His Ser Thr Leu Asp Ser Lys Cys Phe His  
 50 55 60

Ile Trp Ala Ile Thr Asn Ser Ala Ala Val Asn Ile His Ile His Ile  
 65 70 75 80

Phe Trp

&lt;210&gt; 5918

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5918

Ala Phe Leu Pro Ala Gly Pro Ser Gly Phe Pro Ser Gly Pro Gly Cys  
 1 5 10 15

Val Trp Lys Cys His Leu Gly Ala Arg Ala Trp Met Ser Ala Ser Gly  
 20 25 30

Leu Cys Leu Ala Pro Tyr Pro Thr Val Ala Glu Leu Val Tyr Lys Leu  
 35 40 45

Gln Asp Ser Leu Leu Tyr Ser Ser Ser Ser Ser Pro Val Ala Glu Arg  
 50 55 60

Arg Asn Leu Ser Gln Ser Cys Glu Leu Tyr Cys Leu Gly Leu Gly Glu  
 65 70 75 80

Gly Trp His Lys His Ser Leu Ser His Pro Gly Trp Cys Leu Thr Asn  
 85 90 95

Leu Cys Ala Pro Gln Val His Trp Leu Gln Gly Gln Arg Ser Thr  
 100 105 110

## 5203

&lt;210&gt; 5919

&lt;211&gt; 441

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5919

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Arg Arg Arg Arg Ala Cys Arg Ser Ala Glu Gly Thr Gly Leu Arg Ser
 1             5             10             15

Leu Leu Leu Pro Pro Arg Leu Gln Leu Pro Ala Gly Pro Phe Ser Arg
      20             25             30

Cys Arg Trp Asp Pro Val Ser Ser Pro Arg Pro Ser Thr Met Pro Pro
      35             40             45

Lys Lys Gly Gly Asp Gly Ile Lys Pro Pro Pro Ile Ile Gly Arg Phe
 50             55             60

Gly Thr Ser Leu Lys Ile Gly Ile Val Gly Leu Pro Asn Val Gly Lys
 65             70             75             80

Ser Thr Phe Phe Asn Val Leu Thr Asn Ser Gln Ala Ser Ala Glu Asn
      85             90             95

Phe Pro Phe Cys Thr Ile Asp Pro Asn Glu Ser Arg Val Pro Val Pro
      100            105            110

Asp Glu Arg Phe Asp Phe Leu Cys Gln Tyr His Lys Pro Ala Ser Lys
      115            120            125

Ile Pro Ala Phe Leu Asn Val Val Asp Ile Ala Gly Leu Val Lys Gly
      130            135            140

Ala His Asn Gly Gln Gly Leu Gly Asn Ala Phe Leu Ser His Ile Ser
      145            150            155            160

Ala Cys Asp Gly Ile Phe His Leu Thr Arg Ala Phe Glu Asp Asp Asp
      165            170            175

Ile Thr His Val Glu Gly Ser Val Asp Pro Ile Arg Asp Ile Glu Ile
      180            185            190

Ile His Glu Glu Leu Gln Leu Lys Asp Glu Glu Met Ile Gly Pro Ile
      195            200            205

Ile Asp Lys Leu Glu Lys Val Ala Val Arg Gly Gly Asp Lys Lys Leu
      210            215            220

Lys Pro Glu Tyr Asp Ile Met Cys Lys Val Lys Ser Trp Val Ile Asp
      225            230            235            240

```



## 5204

Gln Lys Lys Pro Val Arg Phe Tyr His Asp Trp Asn Asp Lys Glu Ile  
 245 250 255

Glu Val Leu Asn Lys His Leu Phe Leu Thr Ser Lys Pro Met Val Tyr  
 260 265 270

Leu Val Asn Leu Ser Glu Lys Asp Tyr Ile Arg Lys Lys Asn Lys Trp  
 275 280 285

Leu Ile Lys Ile Lys Glu Trp Val Asp Lys Tyr Asp Pro Gly Ala Leu  
 290 295 300

Val Ile Pro Phe Ser Gly Ala Leu Glu Leu Lys Leu Gln Glu Leu Ser  
 305 310 315 320

Ala Glu Glu Arg Gln Lys Tyr Leu Glu Ala Asn Met Thr Gln Ser Ala  
 325 330 335

Leu Pro Lys Ile Ile Lys Ala Gly Phe Ala Ala Leu Gln Leu Glu Tyr  
 340 345 350

Phe Phe Thr Ala Gly Pro Asp Glu Val Arg Ala Trp Thr Ile Arg Lys  
 355 360 365

Gly Thr Lys Ala Pro Gln Ala Ala Gly Lys Ile His Thr Asp Phe Glu  
 370 375 380

Lys Gly Phe Ile Met Ala Glu Val Met Lys Tyr Glu Asp Phe Lys Glu  
 385 390 395 400

Glu Gly Ser Glu Asn Ala Val Lys Ala Ala Gly Lys Tyr Arg Gln Gln  
 405 410 415

Gly Arg Asn Tyr Ile Val Glu Asp Gly Asp Ile Ile Phe Phe Lys Phe  
 420 425 430

Asn Thr Pro Gln Gln Pro Lys Lys Lys  
 435 440

<210> 5920

<211> 275

<212> PRT

<213> Homo sapiens

<400> 5920

Gly Val Ala Leu Phe Lys Ser Ala Ala Gly Asp Gln Pro Thr Ala Ala  
 1 5 10 15

Cys Ile Cys Ile Gln Arg Gln Val Pro Pro Val Pro Ala Ala Arg Ala

## 5205

|   |     |     |
|---|-----|-----|
| 20  | 25  | 30  |
| Pro Gln Ser Arg Thr Arg Ser Ala Gln Ala Lys Leu Ala Leu Thr Met |     |     |
| 35  | 40  | 45  |
| Pro Val Lys Gly Gly Thr Lys Cys Ile Lys Tyr Leu Leu Phe Gly Phe |     |     |
| 50  | 55  | 60  |
| Asn Phe Ile Phe Trp Leu Ala Gly Ile Ala Val Leu Ala Ile Gly Leu |     |     |
| 65  | 70  | 75  |
| Trp Leu Arg Phe Asp Ser Gln Thr Lys Ser Ile Phe Glu Gln Glu Thr |     |     |
| 85  | 90  | 95  |
| Asn Asn Asn Asn Ser Ser Phe Tyr Thr Gly Val Tyr Ile Leu Ile Gly |     |     |
| 100   | 105 | 110 |
| Ala Gly Ala Leu Met Met Leu Val Gly Phe Leu Gly Cys Cys Gly Ala |     |     |
| 115   | 120 | 125 |
| Val Gln Glu Ser Gln Cys Met Leu Gly Leu Phe Phe Gly Phe Leu Leu |     |     |
| 130   | 135 | 140 |
| Val Ile Phe Ala Ile Glu Ile Ala Ala Ala Ile Trp Gly Tyr Ser His |     |     |
| 145   | 150 | 155 |
| Lys Asp Glu Val Ile Lys Glu Val Gln Glu Phe Tyr Lys Asp Thr Tyr |     |     |
| 165   | 170 | 175 |
| Asn Lys Leu Lys Thr Lys Asp Glu Pro Gln Arg Glu Thr Leu Lys Ala |     |     |
| 180   | 185 | 190 |
| Ile His Tyr Ala Leu Asn Cys Cys Gly Leu Ala Gly Gly Val Glu Gln |     |     |
| 195   | 200 | 205 |
| Phe Ile Ser Asp Ile Cys Pro Lys Lys Asp Val Leu Glu Thr Phe Thr |     |     |
| 210   | 215 | 220 |
| Val Lys Ser Cys Pro Asp Ala Ile Lys Glu Val Phe Asp Asn Lys Phe |     |     |
| 225   | 230 | 235 |
| His Ile Ile Gly Ala Val Gly Ile Gly Ile Ala Val Val Met Ile Phe |     |     |
| 245   | 250 | 255 |
| Gly Met Ile Phe Ser Met Ile Leu Cys Cys Ala Ile Arg Arg Asn Arg |     |     |
| 260   | 265 | 270 |
| Glu Met Val   |     |     |
| 275   |     |     |

## 5206

&lt;210&gt; 5921

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5921

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Cys | Arg | Pro | Leu | Ser | Ser | Cys | His | Leu | Leu | Ala | Val | Ala | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Tyr | Phe | Ser | Leu | Ser | Gly | Val | Ile | Cys | Ile | Trp | Arg | Phe | His | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Phe | Ser | Leu | Ser | Tyr | Leu | Glu | Trp | Asn | Pro | Glu | Ser | Cys | Pro | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Thr | Cys | Ser | Tyr | Leu | Lys | Ala | Pro | Glu | Thr | Tyr | Trp | Val | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ser | Cys | Phe | Val | Cys | Ile | Arg | Arg | Val | Val | Ala | Cys | His | Leu | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Phe | Leu | Asn | Asn | Pro | Thr | Ser | Cys | Pro | Pro | Cys | Thr | Tyr | Ile | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ala | Leu | Ile | Trp | Ala | Phe | Phe | Phe | Leu | Gly | Gln | Cys | Leu | Cys | Pro |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |
|-----|-----|-----|
| Asn | Ser | Glu |
|     |     | 115 |

&lt;210&gt; 5922

&lt;211&gt; 291

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (217)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5922

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Leu | Cys | Arg | Leu | Phe | Asn | Ser | Pro | Leu | Lys | Pro | Leu | Ala | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 5207

Leu Asp Pro Val Val Val Thr Phe Trp Tyr Arg Ala Pro Glu Leu Leu  
                   20                  25                  30

Leu Gly Ala Arg His Tyr Thr Lys Ala Ile Asp Ile Trp Ala Ile Gly  
           35                  40                  45

Cys Ile Phe Ala Glu Leu Leu Thr Ser Glu Pro Xaa Phe His Cys Arg  
       50                  55                  60

Gln Glu Asp Ile Lys Thr Ser Asn Pro Tyr His His Asp Gln Leu Asp  
   65                  70                  75                  80

Arg Ile Phe Asn Val Met Gly Phe Pro Ala Asp Lys Asp Trp Glu Asp  
                   85                  90                  95

Ile Lys Lys Met Pro Glu His Ser Thr Leu Met Lys Asp Phe Arg Arg  
           100                  105                  110

Asn Thr Tyr Thr Asn Cys Ser Leu Ile Lys Tyr Met Glu Lys His Lys  
           115                  120                  125

Val Lys Pro Asp Ser Lys Ala Phe His Leu Leu Gln Lys Leu Leu Thr  
       130                  135                  140

Met Asp Pro Ile Lys Arg Ile Thr Ser Glu Gln Ala Met Gln Asp Pro  
   145                  150                  155                  160

Tyr Phe Leu Glu Asp Pro Leu Pro Thr Ser Asp Val Phe Ala Gly Cys  
                   165                  170                  175

Gln Ile Pro Tyr Pro Lys Arg Glu Phe Leu Thr Glu Glu Glu Pro Asp  
           180                  185                  190

Asp Lys Gly Asp Lys Lys Asn Gln Gln Gln Gln Gly Asn Asn His  
       195                  200                  205

Thr Asn Gly Thr Gly His Pro Gly Xaa Gln Asp Ser Ser His Thr Gln  
       210                  215                  220

Gly Pro Pro Leu Lys Lys Val Arg Val Val Pro Pro Thr Thr Thr Ser  
   225                  230                  235                  240

Gly Gly Leu Ile Met Thr Ser Asp Tyr Gln Arg Ser Asn Pro His Ala  
           245                  250                  255

Ala Tyr Pro Asn Pro Gly Pro Ser Thr Ser Gln Pro Gln Ser Ser Met  
           260                  265                  270

Gly Tyr Ser Ala Thr Ser Gln Gln Pro Pro Gln Tyr Ser His Gln Thr  
       275                  280                  285

## 5208

His Arg Tyr  
290

<210> 5923  
<211> 100  
<212> PRT  
<213> Homo sapiens

<400> 5923  
Arg Pro Pro Ser Arg Trp Ser Trp Trp Gln Gly Lys Pro Thr Gly Gly  
1 5 10 15  
Val Cys Val Ala Ala Ala Arg Ser Ser Pro Ser Val Thr Ala Pro Thr  
20 25 30  
Ser Ser Asn Ala Leu Ala Tyr Leu His Ser Ser Ser Arg Pro Lys Arg  
35 40 45  
Pro Ala Trp Trp His Ser Val Pro Ala Arg Pro Leu Arg Gly Pro Arg  
50 55 60  
Thr Ala Met Ala Pro Thr Gly Val Ser Ala Cys Arg Arg Gln Lys Trp  
65 70 75 80  
Ala Pro His Ser Glu Gly Ala Ala Ala Val Gln Pro Gln Val Ala Leu  
85 90 95  
Ala Pro Gly Leu  
100

<210> 5924  
<211> 241  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (13)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (17)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>

## 5209

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (44)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5924

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Arg | Pro | Gly | Pro | Leu | Thr | Ser | Gln | Gly | Met | Asn | Xaa | Ser | Arg | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Pro | Xaa | Leu | Asn | Leu | Leu | Pro | Ser | Ser | Ala | His | Phe | Arg | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Tyr | Lys | Lys | Ser | Ser | Gly | Pro | Leu | Lys | Ala | Xaa | Lys | Leu | Ile | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Trp | Asn | Cys | Trp | Glu | Asp | Ser | Leu | Ser | Gly | Ile | Ala | Met | Asn | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Ser | Arg | Gly | Ser | Asn | Leu | Asn | Ser | Ser | Gly | Ala | Asn | Arg | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Ser | Gly | Gly | Thr | Gly | Ser | Gly | Thr | Gln | Gly | Ala | Thr | Lys | Pro |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Thr | Pro | His | Arg | Pro | Ser | Thr | Ala | Ser | Gly | Ser | Ser | Val | Val |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ala | Ser | Val | Gln | Lys | Leu | Ile | His | Thr | Glu | Asp | Pro | Phe | Asn | Asp |
|     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | His | Gln | Glu | Arg | Gln | Glu | Val | Glu | Met | Leu | Ala | Lys | Lys | Phe | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Tyr | Tyr | Asp | Glu | Leu | Val | Pro | Ala | Ser | Leu | Thr | Thr | Lys | Tyr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Phe | Tyr | Ile | Asn | Thr | Gly | Thr | Leu | Gln | Phe | Arg | Gln | Ala | Ser |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Thr | Glu | Glu | Asp | Asp | Ile | Thr | Asp | Asn | Gln | Lys | His | Lys | Pro | Pro |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Val | Pro | Lys | Ile | Lys | Glu | Asp | Asp | Ile | Glu | Met | Lys | Lys | Arg | Lys |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Glu | Glu | Gly | Glu | Lys | Glu | Lys | Lys | Pro | Arg | Lys | Lys | Val | Pro |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

## 5210

Lys Gln Leu Gly Val Val Ala Leu Asn Ser His Lys Ser Glu Lys Lys  
 225 230 235 240

Lys

<210> 5925

<211> 330

<212> PRT

<213> Homo sapiens

<400> 5925

Ala Gly Ser Arg Cys Pro Ala Trp Arg Ala Arg Ser Ala Cys Arg Trp  
 1 5 10 15

Pro Leu Ala Arg Cys Ser Ser Pro Gly Cys Asp Ser Gly Phe Gly Lys  
 20 25 30

Glu Thr Ala Lys Lys Leu Asp Ser Met Gly Phe Thr Val Leu Ala Thr  
 35 40 45

Val Leu Glu Leu Asn Ser Pro Gly Ala Ile Glu Leu Arg Thr Cys Cys  
 50 55 60

Ser Pro Arg Leu Arg Leu Leu Gln Met Asp Leu Thr Lys Pro Gly Asp  
 65 70 75 80

Ile Ser Arg Val Leu Glu Phe Thr Lys Ala His Thr Thr Ser Thr Gly  
 85 90 95

Leu Trp Gly Leu Val Asn Asn Ala Gly His Asn Glu Val Val Ala Asp  
 100 105 110

Ala Glu Leu Ser Pro Val Ala Thr Phe Arg Ser Cys Met Glu Val Asn  
 115 120 125

Phe Phe Gly Ala Leu Glu Leu Thr Lys Gly Leu Leu Pro Leu Leu Arg  
 130 135 140

Ser Ser Arg Gly Arg Ile Val Thr Val Gly Ser Pro Ala Gly Asp Met  
 145 150 155 160

Pro Tyr Pro Cys Leu Gly Ala Tyr Gly Thr Ser Lys Ala Ala Val Ala  
 165 170 175

Leu Leu Met Asp Thr Phe Ser Cys Glu Leu Leu Pro Trp Gly Val Lys  
 180 185 190

## 5211

Val Ser Ile Ile Gln Pro Gly Cys Phe Lys Thr Glu Ser Val Arg Asn  
 195 200 205

Val Gly Gln Trp Glu Lys Arg Lys Gln Leu Leu Leu Ala Asn Leu Pro  
 210 215 220

Gln Glu Leu Leu Gln Ala Tyr Gly Lys Asp Tyr Ile Glu His Leu His  
 225 230 235 240

Gly Gln Phe Leu His Ser Leu Arg Leu Ala Met Ser Asp Leu Thr Pro  
 245 250 255

Val Val Asp Ala Ile Thr Asp Ala Leu Leu Ala Ala Arg Pro Arg Arg  
 260 265 270

Arg Tyr Tyr Pro Gly Gln Gly Leu Gly Leu Met Tyr Phe Ile His Tyr  
 275 280 285

Tyr Leu Pro Glu Gly Leu Arg Ala Ala Ser Cys Arg Pro Ser Ser Ser  
 290 295 300

Val Thr Val Cys Leu Glu His Cys Ser Leu Ala Ser Leu Ala Leu Pro  
 305 310 315 320

His His Arg Thr Gln Pro Arg Thr Gln Thr  
 325 330

<210> 5926

<211> 88

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (56)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (82)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5926

Cys Xaa His Met Val Ile Met Cys Asp Trp Ile Met Lys Ile Ile Val



## 5212

```

1             5             10             15
Val Cys Val Gly Thr Arg Asp Cys Pro Val Ser Arg Thr Pro Ala His
      20             25             30
Tyr Leu Ser Ile Leu Gln Pro Phe Ile Trp Lys Leu Pro Thr Ser Leu
      35             40             45
Cys Cys Val Cys Leu His Met Xaa Gly Phe Ala Val Leu Ala Leu Thr
      50             55             60
Ala His Arg Glu Cys Arg Pro His Pro Asn Pro His Gln Leu Pro Leu
      65             70             75             80
Glu Xaa Gln Asn Leu Gly Trp Gly
      85

```

&lt;210&gt; 5927

&lt;211&gt; 40

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5927

```

Arg Tyr His Ile Leu Ser Gly Ile Ser Pro Pro Ala Leu Trp Leu Leu
  1             5             10             15
Val Glu Arg Leu Phe Gly Tyr Gly Leu Ala Val Glu Lys Ile Gln Val
      20             25             30
Ile Leu Leu Asn Asp Phe Thr Phe
      35             40

```

&lt;210&gt; 5928

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (96)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5928

```

Thr Phe Pro Asn Gly Ala Phe Ala Leu Ile Ser Lys Leu Thr Ala Arg
  1             5             10             15
Asp Ala Phe Leu Tyr Phe Asp Cys Phe Thr Val Glu Gly Gln Ile Pro

```

## 5213

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 20  |     | 25  |     | 30  |     |     |     |     |     |     |     |     |     |     |
| Arg | Leu | Ser | Lys | Val | Asn | Leu | Phe | Thr | Leu | Leu | Ser | Leu | Trp | Met | Glu |
|     | 35  |     | 40  |     | 45  |     |     |     |     |     |     |     |     |     |     |
| Leu | Phe | Pro | Ala | Glu | Ala | Gln | Arg | Gln | Lys | Ser | Gln | Lys | Asn | Glu | Glu |
|     | 50  |     | 55  |     | 60  |     |     |     |     |     |     |     |     |     |     |
| Gly | Lys | His | Gly | Pro | Leu | Gly | Asp | Asn | Glu | Glu | Arg | Thr | Arg | Val | Ser |
| 65  |     |     | 70  |     | 75  |     |     |     |     |     |     |     |     | 80  |     |
| Thr | Asp | Lys | Arg | Gln | Lys | Thr | Met | Phe | Cys | Leu | Phe | Glu | Asn | Asp | Xaa |
|     |     |     | 85  |     | 90  |     |     |     |     |     |     |     |     | 95  |     |
| Lys | Cys | Lys | Ala | Leu | Thr | Val | Met | Ile | Arg | Ser | Met | Ser | Arg | Ser | Val |
|     | 100 |     | 105 |     | 110 |     |     |     |     |     |     |     |     |     |     |

Pro

<210> 5929  
 <211> 52  
 <212> PRT  
 <213> Homo sapiens

<400> 5929  
 Cys Ile Gly Pro Lys Cys Lys Leu His Trp Ser Asp Leu Glu Ala Phe  
 1 5 10 15  
 Met Leu Thr Ser Phe Gly Lys Val Lys Asn Asn Lys Ile Ile Leu Asp  
 20 25 30  
 Phe Ile Leu Tyr Ile Lys Ile Tyr Leu Leu Arg Lys Gln Ser Val Tyr  
 35 40 45  
 Tyr Leu Leu Val  
 50

<210> 5930  
 <211> 89  
 <212> PRT  
 <213> Homo sapiens

<400> 5930  
 Ala Glu Gln Glu Glu His Gly Lys Arg Lys Lys Lys Gly Lys Gly Leu  
 1 5 10 15

## 5214

Gly Lys Lys Arg Asp Pro Cys Leu Arg Lys Tyr Lys Asp Phe Cys Ile  
                   20                  25                  30

His Gly Glu Cys Lys Tyr Val Lys Glu Leu Arg Ala Pro Ser Cys Ile  
           35                  40                  45

Cys His Pro Gly Tyr His Gly Glu Arg Cys His Gly Leu Ser Leu Pro  
       50                  55                  60

Val Glu Asn Arg Leu Tyr Thr Tyr Asp His Thr Thr Ile Leu Ala Val  
       65                  70                  75                  80

Val Ala Val Val Leu Asp Leu Met Ser  
                   85

<210> 5931

<211> 85

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (66)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5931

Glu Ser Pro Thr Ile Val Lys Ala Gly Thr Pro Ala Gly Thr Gly Pro  
       1                  5                  10                  15

Glu Phe Pro Gly Arg Pro Thr Arg Pro Pro Thr Arg Pro Gly Leu Leu  
                   20                  25                  30

Glu Pro Trp Thr Ser Lys Gly Val Glu Ile Ala Ala Ala Pro His Tyr  
           35                  40                  45

Lys His Leu Gly Leu Glu Ala Thr Glu Tyr His Phe Leu His Ile Leu  
       50                  55                  60

Leu Xaa Lys Ala Gly Gly Glu Pro Ala Leu Thr Lys Arg Val Gly Asp  
       65                  70                  75                  80

Gln Thr Phe Thr Ser  
                   85

<210> 5932

<211> 155

<212> PRT

## 5215

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (21)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5932

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Trp | Thr | Glu | Gly | Gln | Thr | Val | Gln | Gly | Arg | Glu | Asp | His | Trp | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Glu | Val | Thr | Xaa | Arg | Glu | Val | Ser | Val | Gly | Arg | Gly | Glu | Thr | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Ile | Glu | Glu | Gln | Lys | Ala | Leu | Ala | Leu | Gln | Leu | Gln | Asn | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Gln | Glu | Arg | Glu | His | Ser | Val | His | Asp | Ser | Val | Glu | Leu | His |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Val | Pro | Leu | Glu | Lys | Glu | Ile | Pro | Val | Thr | Val | Val | Gln | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gln | Lys | Lys | Gly | His | Lys | Leu | Thr | Asp | Ser | Glu | Asp | Glu | Phe | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ile | Thr | Glu | Glu | Met | Glu | Lys | Glu | Ile | Lys | Asn | Val | Phe | Arg | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Asn | Gln | Asp | Glu | Val | Leu | Ser | Glu | Ala | Phe | Arg | Leu | Thr | Ile | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Asp | Ile | Gln | Thr | Leu | Asn | His | Leu | Asn | Trp | Leu | Asn | Asp | Glu |
|     |     | 130 |     |     |     |     | 135 |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ile | Asn | Phe | Tyr | Met | Asn | Met | Leu | Met | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |

&lt;210&gt; 5933

&lt;211&gt; 150

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5933

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Thr | Thr | Thr | Arg | Asp | Phe | Thr | Gln | Leu | Asn | Glu | Leu | Gln | Cys | Arg |
| 1   |     |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Pro | Arg | Arg | Leu | Val | Val | Leu | Gly | Phe | Pro | Cys | Asn | Gln | Phe | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

## 5216

His Gln Glu Asn Cys Gln Asn Glu Glu Ile Leu Asn Ser Leu Lys Tyr  
           35                                  40                                  45  
 Val Arg Pro Gly Gly Gly Tyr Gln Pro Thr Phe Thr Leu Val Gln Lys  
           50                                  55                                  60  
 Cys Glu Val Asn Gly Gln Asn Glu His Pro Val Phe Ala Tyr Leu Lys  
           65                                  70                                  75                                  80  
 Asp Lys Leu Pro Tyr Pro Tyr Asp Asp Pro Phe Ser Leu Met Thr Asp  
                                   85                                  90                                  95  
 Pro Lys Leu Ile Ile Trp Ser Pro Val Arg Arg Ser Asp Val Ala Trp  
                                   100                                  105                                  110  
 Asn Phe Glu Lys Phe Leu Ile Gly Pro Glu Gly Glu Pro Phe Arg Arg  
           115                                  120                                  125  
 Tyr Ser Arg Thr Phe Pro Thr Ile Asn Ile Glu Pro Asp Ile Lys Arg  
           130                                  135                                  140  
 Leu Leu Lys Val Ala Ile  
   145                                  150

&lt;210&gt; 5934

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5934

His Ile Arg Thr Gly Glu Arg Glu Arg Arg Gly Leu Phe Phe Cys Ser  
   1                                  5                                  10                                  15  
 Ile Phe Gln Ser His Ile Arg Val Ile Leu Asn Cys Asn Lys Asp Gln  
           20                                  25                                  30  
 Leu Leu Lys Ile Ser Leu Leu Lys Ile Gln Asn Asp Leu Ser Ile Leu  
           35                                  40                                  45  
 Lys Ile Ile Tyr Leu Pro Cys Ser Cys Leu Leu Thr Leu Ala Ile Ser  
           50                                  55                                  60  
 Trp Arg Gly  
   65

&lt;210&gt; 5935

## 5217

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5935

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Gly | Asp | Thr | Ile | Glu | Gly | Thr | Pro | Ala | Gly | Thr | Gly | Pro | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Pro | Gly | Arg | Pro | Thr | Arg | Pro | Xaa | Thr | Val | Arg | Leu | Ser | Ala | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gly | Ala | Leu | Leu | Trp | Cys | Leu | Leu | Glu | Val | Tyr | Cys | His | Tyr | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Pro | Cys | Leu | Leu | Ala | Ser | Leu | Asp | Leu | Tyr | Ser | Lys | Gln | Ser | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asp | Asp | Lys | Phe | Cys | Arg | Arg | Val | Tyr | Ser | Glu | Pro | Leu | Thr | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Lys | Gly | Lys | Met | Gly | Gly | Leu | Pro | Glu | Ile | Pro | Leu | Lys | Gln | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Trp | Gly | Gly | Arg | Leu | Gly | Tyr | Leu | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |

&lt;210&gt; 5936

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (21)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5936

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Leu | Trp | Phe | Phe | Ser | Ser | Arg | Gly | His | Asp | Ala | Ser | Gln | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Ala | Leu | Xaa | Thr | Ala | Ala | Ser | Tyr | Pro | Arg | Ala | Cys | Gln | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Ala | Met | Leu | Ser | Lys | Gly | Ala | Leu | Asn | Pro | Ala | Asp | Ile | Thr |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5218

35                                      40                                      45  
 Val Leu Phe Lys Met Phe Thr Ser Met Asp Pro Pro Pro Val Glu Leu  
     50                                      55                                      60  
 Glu Val Ala Ser Gln Glu Ser Pro Met Ser Ala Gly Lys Val Thr Leu  
     65                                      70                                      75                                      80  
 Glu Ser Leu Cys Leu Ser Asp Cys Leu Lys Ala Val Asn Ala Asn Pro  
                                     85                                      90                                      95  
 Ser Leu Ser Trp Ser Phe Leu Ser His Thr Leu Cys Leu Glu Pro Val  
                                     100                                      105                                      110  
 Gly Pro Leu Leu Cys Arg Asp Thr Leu Arg Gly Gly Gly  
                                     115                                      120                                      125

&lt;210&gt; 5937

&lt;211&gt; 223

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (35)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5937

Arg His Cys Leu Pro Pro Thr Pro Pro Gln Gly Cys Gly Leu Pro Ala  
     1                                      5                                      10                                      15  
 Leu Gly Gly Gln Ala Met Leu Thr Leu His Gly Gly His Ser Ser Arg  
                                     20                                      25                                      30  
 Glu Ala Xaa Lys Val Val Asn Ser Ile Leu Ala Phe Arg Glu Lys Glu  
                                     35                                      40                                      45  
 Trp Gln Arg Leu Gln Ser Asn Pro His Leu Lys Glu Gly Ser Val Thr  
     50                                      55                                      60  
 Ser Val Asn Leu Thr Lys Leu Glu Gly Gly Val Ala Tyr Asn Val Ile  
     65                                      70                                      75                                      80  
 Pro Ala Thr Met Ser Ala Ser Phe Asp Phe Arg Val Ala Pro Asp Val  
                                     85                                      90                                      95  
 Asp Phe Lys Ala Phe Glu Glu Gln Leu Gln Ser Trp Cys Gln Ala Ala  
                                     100                                      105                                      110

## 5219

Gly Glu Gly Val Thr Leu Glu Phe Ala Gln Lys Trp Met His Pro Gln  
 115 120 125  
 Val Thr Pro Thr Asp Asp Ser Asn Pro Trp Trp Ala Ala Phe Ser Arg  
 130 135 140  
 Val Cys Lys Asp Met Asn Leu Thr Leu Glu Pro Glu Ile Met Pro Ala  
 145 150 155 160  
 Ala Thr Asp Asn Arg Tyr Ile Arg Ala Val Gly Val Pro Ala Leu Gly  
 165 170 175  
 Phe Ser Pro Met Asn Arg Thr Pro Val Leu Leu His Asp His Asp Glu  
 180 185 190  
 Arg Leu His Glu Ala Val Phe Leu Arg Gly Val Asp Ile Tyr Thr Arg  
 195 200 205  
 Leu Leu Pro Ala Leu Ala Ser Val Pro Ala Leu Pro Ser Asp Ser  
 210 215 220

&lt;210&gt; 5938

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5938

Ala Leu Cys Pro Pro Arg Gly Thr Ala Ser Gly Pro Arg His Thr Leu  
 1 5 10 15  
 Trp Leu Asn Gln Gly Leu Gln Gly Pro Cys Gly Pro Ala Gln Ala Leu  
 20 25 30  
 Met Gly Arg His Val Arg Ser Trp Arg Thr Gln Ala Pro Phe Leu Ser  
 35 40 45  
 Gly Val Val Phe Phe Leu Cys Pro Gly Ala Ser Pro Ser Ser Asn Gly  
 50 55 60  
 Pro Phe Ala Arg Phe Gly Val Pro Leu Ala Gly Pro Ile Arg Thr Leu  
 65 70 75 80  
 Arg Ser Asn Gln Gly Arg  
 85

&lt;210&gt; 5939

&lt;211&gt; 130



## 5220

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5939

Arg Arg Asp Ala Cys Pro Ile Ser Arg Glu Pro Pro Thr Arg Pro Trp  
 1 5 10 15

Gly Thr Thr Ser Thr Leu Leu Leu Ser Leu Gln Ser Pro Val Pro Arg  
 20 25 30

Met Gly His Leu Gln Pro Leu Ala Leu Pro Gln Phe Leu His Leu Pro  
 35 40 45

Ala Ala Ala Pro Arg Asn Trp Ala Pro Ser Ser Arg Ala Trp Pro Ala  
 50 55 60

Cys Ala Pro Arg Ser Arg Pro Gly Arg Ala Ala Val Phe Leu Lys Tyr  
 65 70 75 80

Ala Arg Pro Gln Arg Gln Gly Thr Ser Leu Ala Ala Ala Leu Pro Ala  
 85 90 95

Ala Ala Ser Ser Leu Ser Leu Pro Glu Tyr Trp Asp Ser Val Thr Lys  
 100 105 110

Lys Ser Thr Thr Lys Asn Lys Thr Leu Pro Val Cys Val Arg Leu Ser  
 115 120 125

Ser Gln  
 130

&lt;210&gt; 5940

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5940

Gly Arg Thr Cys Lys Lys Glu Leu Thr Arg Lys Asp Thr Ile Met Ala  
 1 5 10 15

His Val Thr Glu Phe His Asn Gly His Arg Tyr Phe Tyr Glu Met Asp  
 20 25 30

Glu Val Glu Gly Glu Thr Leu Pro Ser Ser Ser Thr Thr Leu Asp Asn  
 35 40 45

Leu Thr Ala Asn Lys Pro Ser Ser Ala Ile Thr Val Ile Asp His Ser  
 50 55 60

## 5221

Pro Ala Asn Ser Ser Pro Arg Gly Lys Trp Gln Cys Arg Ile Cys Glu  
65 70 75 80

Asp Met Phe Asp Ser Gln Glu Tyr Val Lys Gln His Cys Met Ser Leu  
85 90 95

Ala Ser His Lys Phe His Arg Tyr Ser Cys Ala His Cys Arg Lys Pro  
100 105 110

Phe His Lys Ile Glu Thr Leu Tyr Arg His Cys Gln Asp Glu His Asp  
115 120 125

Asn Glu Ile Lys Ile Lys Tyr Phe Cys Gly Leu Cys Asp Leu Ile Phe  
130 135 140

Asn Val Glu Glu  
145

<210> 5941  
<211> 268  
<212> PRT  
<213> Homo sapiens

<400> 5941  
Pro Gly Arg Pro Thr Arg Pro Arg Thr Arg Gly Ile Asn Lys Leu Ile  
1 5 10 15

Arg Ile Gly Arg Asn Glu Cys Val Val Val Ile Arg Val Asp Lys Glu  
20 25 30

Lys Gly Tyr Ile Asp Leu Ser Lys Arg Arg Val Ser Pro Glu Glu Ala  
35 40 45

Ile Lys Cys Glu Asp Lys Phe Thr Lys Ser Lys Thr Val Tyr Ser Ile  
50 55 60

Leu Arg His Val Ala Glu Val Leu Glu Tyr Thr Lys Asp Glu Gln Leu  
65 70 75 80

Glu Ser Leu Phe Gln Arg Thr Ala Trp Val Phe Asp Asp Lys Tyr Lys  
85 90 95

Arg Pro Gly Tyr Gly Ala Tyr Asp Ala Phe Lys His Ala Val Ser Asp  
100 105 110

Pro Ser Ile Leu Asp Ser Leu Asp Leu Asn Glu Asp Glu Arg Glu Val  
115 120 125

Leu Ile Asn Asn Ile Asn Arg Arg Leu Thr Pro Gln Ala Val Lys Ile

## 5222

|   |     |             |
|---|-----|-------------|
| 130   | 135 | 140         |
| Arg Ala Asp Ile Glu Val Ala Cys Tyr Gly Tyr Glu Gly Ile Asp Ala |     |             |
| 145   | 150 | 155 160     |
| Val Lys Glu Ala Leu Arg Ala Gly Leu Asn Cys Ser Thr Glu Asn Met |     |             |
|   | 165 | 170 175     |
| Pro Ile Lys Ile Asn Leu Ile Ala Pro Pro Arg Tyr Val Met Thr Thr |     |             |
|   | 180 | 185 190     |
| Thr Thr Leu Glu Arg Thr Glu Gly Leu Ser Val Leu Ser Gln Ala Met |     |             |
|   | 195 | 200 205     |
| Ala Val Ile Lys Glu Lys Ile Glu Glu Lys Arg Gly Val Phe Asn Val |     |             |
|   | 210 | 215 220     |
| Gln Met Glu Pro Lys Val Val Thr Asp Thr Asp Glu Thr Glu Leu Ala |     |             |
|   | 225 | 230 235 240 |
| Arg Gln Met Glu Arg Leu Glu Arg Glu Asn Ala Glu Val Asp Gly Asp |     |             |
|   | 245 | 250 255     |
| Asp Asp Ala Glu Glu Met Glu Ala Lys Ala Glu Asp                 |     |             |
|   | 260 | 265         |

&lt;210&gt; 5942

&lt;211&gt; 249

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5942

|   |
|---|
| Ser Arg Glu Ile Asp Ile Ile His Val Ile Lys Asn Met Gly Phe Asn |
| 1 5 10 15   |
| Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu Leu Leu Leu Leu Thr |
| 20 25 30  |
| Leu Cys Leu Thr Val Val Gly Trp Ala Thr Ser Asn Tyr Phe Val Gly |
| 35 40 45  |
| Ala Ile Gln Glu Ile Pro Lys Ala Lys Glu Phe Met Ala Asn Phe His |
| 50 55 60  |
| Lys Thr Leu Ile Leu Gly Lys Gly Lys Thr Leu Thr Asn Glu Ala Ser |
| 65 70 75 80   |
| Thr Lys Lys Val Glu Leu Asp Asn Cys Pro Ser Val Ser Pro Tyr Leu |
| 85 90 95  |

## 5223

Arg Gly Gln Ser Lys Leu Ile Phe Lys Pro Asp Leu Thr Leu Glu Glu  
                   100                  105                  110  
 Val Gln Ala Glu Asn Pro Lys Val Ser Arg Gly Arg Tyr Arg Pro Gln  
                   115                  120                  125  
 Glu Cys Lys Ala Leu Gln Arg Val Ala Ile Leu Val Pro His Arg Asn  
                   130                  135                  140  
 Arg Glu Lys His Leu Met Tyr Leu Leu Glu His Leu His Pro Phe Leu  
                   145                  150                  155                  160  
 Gln Arg Gln Gln Leu Asp Tyr Gly Ile Tyr Val Ile His Gln Ala Glu  
                                   165                  170                  175  
 Gly Lys Lys Phe Asn Arg Ala Lys Leu Leu Asn Val Gly Tyr Leu Glu  
                   180                  185                  190  
 Ala Leu Lys Glu Glu Asn Trp Asp Cys Phe Ile Phe His Asp Val Thr  
                   195                  200                  205  
 Trp Tyr Pro Arg Met Thr Leu Thr Phe Thr Ser Val Arg Ser Ile Pro  
                   210                  215                  220  
 Ser Ile Trp Trp Leu Ala Gly Thr Ala Leu Gly Thr Gly Tyr Val Thr  
                   225                  230                  235                  240  
 Val Asp Ile Leu Gly Val Leu Leu Pro  
                   245

&lt;210&gt; 5943

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5943

Gln Ala Pro Arg Arg Pro Ser Pro Ala Ser Leu Cys Gly Pro Arg Arg  
   1                  5                  10                  15

Pro Ala Ala Pro Glu Leu Leu Thr Val  
                   20                  25

&lt;210&gt; 5944

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5224

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5944

Gln Gly Gly Asp Pro Trp Val Val Arg Gln Leu Trp Val Asn Phe Val  
 1 5 10 15

Ser Thr Leu Ser Arg Gly Lys Phe Gly Leu Ser Pro Gly Val His Thr  
 20 25 30

Ala Ala Ala Thr Gln Cys Ala Thr Tyr His Phe Phe Leu Xaa Cys Phe  
 35 40 45

Val Leu Phe Leu Lys Asp His Phe Ile Leu Lys Arg Lys Ala Asp Pro  
 50 55 60

Ser Lys His Glu Ser Ile  
 65 70

&lt;210&gt; 5945

&lt;211&gt; 409

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5945

Pro Val Xaa Pro Arg Val Arg Arg Arg Arg Ala Lys Val Gln Gln Gly  
 1 5 10 15

Ala Val Gly Arg Ala Arg Arg Phe Pro Ala Arg Val Ser Ala Arg Gly  
 20 25 30

Ser Ala Pro Gly Pro Gly Leu Gly Gly Ala Gly Ala Leu Asp Pro Pro  
 35 40 45

Ala Val Val Ala Glu Ser Val Ser Ser Leu Thr Ile Ala Asp Ala Phe  
 50 55 60

Ile Ala Ala Gly Glu Ser Ser Ala Pro Thr Pro Pro Arg Pro Ala Leu  
 65 70 75 80

Pro Arg Arg Phe Ile Cys Ser Phe Pro Asp Cys Ser Ala Asn Tyr Ser

## 85

90

95

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Trp | Lys | Leu | Asp | Ala | His | Leu | Cys | Lys | His | Thr | Gly | Glu | Arg |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     | 110 |     |     |     |
| Pro | Phe | Val | Cys | Asp | Tyr | Glu | Gly | Cys | Gly | Lys | Ala | Phe | Ile | Arg | Asp |
|     |     |     | 115 |     |     |     |     |     | 120 |     |     | 125 |     |     |     |
| Tyr | His | Leu | Ser | Arg | His | Ile | Leu | Thr | His | Thr | Gly | Glu | Lys | Pro | Phe |
|     |     |     | 130 |     |     |     |     |     | 135 |     |     | 140 |     |     |     |
| Val | Cys | Ala | Ala | Asn | Gly | Cys | Asp | Gln | Lys | Phe | Asn | Thr | Lys | Ser | Asn |
| 145 |     |     | 150 |     |     |     |     |     | 155 |     |     | 160 |     |     |     |
| Leu | Lys | Lys | His | Phe | Glu | Arg | Lys | His | Glu | Asn | Gln | Gln | Lys | Gln | Tyr |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     | 175 |     |     |     |
| Ile | Cys | Ser | Phe | Glu | Asp | Cys | Lys | Lys | Thr | Phe | Lys | Lys | His | Gln | Gln |
|     |     |     | 180 |     |     |     |     |     | 185 |     |     | 190 |     |     |     |
| Leu | Lys | Ile | His | Gln | Cys | Gln | His | Thr | Asn | Glu | Pro | Leu | Phe | Lys | Cys |
|     |     |     | 195 |     |     |     |     |     | 200 |     |     | 205 |     |     |     |
| Thr | Gln | Glu | Gly | Cys | Gly | Lys | His | Phe | Ala | Ser | Pro | Ser | Lys | Leu | Lys |
| 210 |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |     |     |
| Arg | His | Ala | Lys | Ala | His | Glu | Gly | Tyr | Val | Cys | Gln | Lys | Gly | Cys | Ser |
| 225 |     |     | 230 |     |     |     |     |     | 235 |     |     | 240 |     |     |     |
| Phe | Val | Ala | Lys | Thr | Trp | Thr | Glu | Leu | Leu | Lys | His | Val | Arg | Glu | Thr |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     | 255 |     |     |     |
| His | Lys | Glu | Glu | Ile | Leu | Cys | Glu | Val | Cys | Arg | Lys | Thr | Phe | Lys | Arg |
|     |     |     | 260 |     |     |     |     |     | 265 |     |     | 270 |     |     |     |
| Lys | Asp | Tyr | Leu | Lys | Gln | His | Met | Lys | Thr | His | Ala | Pro | Glu | Arg | Asp |
| 275 |     |     | 280 |     |     |     |     |     | 285 |     |     |     |     |     |     |
| Val | Cys | Arg | Cys | Pro | Arg | Glu | Gly | Cys | Gly | Arg | Thr | Tyr | Thr | Thr | Val |
| 290 |     |     | 295 |     |     |     |     |     | 300 |     |     |     |     |     |     |
| Phe | Asn | Leu | Gln | Ser | His | Ile | Leu | Ser | Phe | His | Glu | Glu | Ser | Arg | Pro |
| 305 |     |     | 310 |     |     |     |     |     | 315 |     |     | 320 |     |     |     |
| Phe | Val | Cys | Glu | His | Ala | Gly | Cys | Gly | Lys | Thr | Phe | Ala | Met | Lys | Gln |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     | 335 |     |     |     |
| Ser | Leu | Thr | Arg | His | Ala | Val | Val | His | Asp | Pro | Asp | Lys | Lys | Lys | Met |
|     |     |     | 340 |     |     |     |     |     | 345 |     |     | 350 |     |     |     |
| Lys | Leu | Lys | Val | Lys | Lys | Ser | Arg | Glu | Lys | Arg | Ser | Leu | Ala | Ser | His |

[illegible]

<211> 288

## 5227

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (78)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (79)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5947

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Val | Ile | Arg | Arg | Thr | Val | Glu | Glu | Arg | Lys | Leu | Lys | Leu | Glu | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Gln | Glu | Phe | Glu | Gln | Leu | Arg | Gln | Glu | Met | Gly | Glu | Glu | Glu |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Asn | Glu | Thr | Phe | Gly | Leu | Ser | Arg | Glu | Tyr | Glu | Glu | Leu | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Leu | Lys | Arg | Ser | Gly | Ser | Ile | Gln | Ala | Lys | Asn | Leu | Lys | Ser | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Glu | Lys | Ile | Gly | Gln | Leu | Ser | Glu | Lys | Glu | Ile | Gln | Xaa | Xaa | Ile |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Glu | Arg | Ala | Arg | Arg | Arg | Ala | Ile | Asp | Leu | Glu | Ile | Lys | Glu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Glu | Ala | Glu | Asn | Phe | His | Glu | Glu | Asp | Asp | Val | Asp | Val | Arg | Pro |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Lys | Ser | Glu | Ala | Pro | Phe | Thr | His | Lys | Val | Asn | Met | Lys | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Phe | Glu | Gln | Met | Ala | Lys | Ala | Arg | Glu | Glu | Glu | Glu | Gln | Arg | Arg |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Glu | Glu | Gln | Lys | Leu | Leu | Arg | Met | Gln | Phe | Glu | Gln | Arg | Glu | Ile |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ala | Ala | Leu | Gln | Lys | Lys | Arg | Glu | Glu | Glu | Glu | Glu | Glu | Glu | Gly |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ile | Met | Asn | Gly | Ser | Thr | Ala | Glu | Asp | Glu | Glu | Gln | Thr | Arg | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Pro | Trp | Phe | Lys | Lys | Pro | Leu | Lys | Asn | Thr | Ser | Val | Val | Asp |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 5228

|   |     |         |
|---|-----|---------|
| 195   | 200 | 205     |
| Ser Glu Pro Val Arg Phe Thr Val Lys Val Thr Gly Glu Pro Lys Pro |     |         |
| 210   | 215 | 220     |
| Glu Ile Thr Trp Trp Phe Glu Gly Glu Ile Leu Gln Asp Gly Glu Asp |     |         |
| 225   | 230 | 235 240 |
| Tyr Gln Tyr Ile Glu Arg Gly Glu Thr Tyr Cys Leu Tyr Leu Pro Glu |     |         |
|   | 245 | 250 255 |
| Thr Phe Pro Glu Asp Gly Gly Glu Tyr Met Cys Lys Ala Val Asn Asn |     |         |
|   | 260 | 265 270 |
| Lys Gly Ser Ala Ala Ser Thr Cys Ile Leu Thr Ile Glu Ser Lys Asn |     |         |
| 275   | 280 | 285     |

&lt;210&gt; 5948

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (15)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (66)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5229

&lt;400&gt; 5948

Trp His Tyr Gly Met Tyr Gly Gln Ala Xaa Pro Cys Gln Glu Xaa Ile  
 1 5 10 15  
 Pro Gly Met Val Glu Ser Phe Ile Xaa Asn Gly Trp Phe Ser Xaa Tyr  
 20 25 30  
 Ala Lys Arg Pro Met Ser Asn Pro Leu Leu Leu Ile Pro Ala Ala Trp  
 35 40 45  
 Gly Leu Val Pro Val Val Pro Gln Lys Cys Gly Pro Arg Thr Gln Pro  
 50 55 60  
 Val Xaa Ala Ser Ser Gly Asn Leu Val Lys Lys Cys Lys Leu Leu Gly  
 65 70 75 80  
 Pro Thr Leu Asn Leu Leu Asn His Lys Leu Cys Phe Asn Lys Gln Pro  
 85 90 95  
 Ala Leu

&lt;210&gt; 5949

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5949

Val Pro Asp Phe Gln Gly Gln Gln Phe Ile Leu Glu Lys Gly Asp Tyr  
 1 5 10 15  
 Pro Arg Trp Ser Ala Trp Ser Gly Ser Ser Ser His Asn Ser Asn Gln  
 20 25 30  
 Leu Leu Ser Phe Arg Pro Val Leu Cys Ala Asn His Asn Asp Ser Arg  
 35 40 45  
 Val Thr Leu Phe Glu Gly Asp Asn Phe Gln Gly Cys Lys Phe Asp Leu  
 50 55 60  
 Val Asp Asp Tyr Pro Ser Leu Pro Ser Met Gly Trp Ala Ser Lys Asp  
 65 70 75 80  
 Val Gly Ser Leu Lys Val Ser Ser Gly Ala Trp Val Ala Tyr Gln Tyr  
 85 90 95  
 Pro Gly Tyr Arg Gly Tyr Gln Tyr Val Leu Glu Arg Asp Arg His Ser  
 100 105 110

## 5230

Gly Glu Phe Cys Thr Tyr Gly Glu Leu Gly Thr Gln Ala His Thr Gly  
 115 120 125

Gln Leu Gln Ser Ile Arg Arg Val Gln His  
 130 135

<210> 5950

<211> 196

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (158)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5950

Lys Lys Asp Phe Phe Gly Lys Ser Asp Pro Phe Leu Val Phe Tyr Arg  
 1 5 10 15

Ser Asn Glu Asp Gly Thr Phe Thr Ile Cys His Lys Thr Glu Val Val  
 20 25 30

Lys Asn Thr Leu Asn Pro Val Trp Gln Pro Phe Ser Ile Pro Val Arg  
 35 40 45

Ala Leu Cys Asn Gly Asp Tyr Asp Arg Thr Val Lys Ile Asp Val Tyr  
 50 55 60

Asp Trp Asp Arg Asp Gly Ser His Asp Phe Ile Gly Glu Phe Thr Thr  
 65 70 75 80

Ser Tyr Arg Glu Leu Ser Lys Ala Gln Asn Gln Phe Thr Val Tyr Glu  
 85 90 95

Val Leu Asn Pro Arg Lys Lys Cys Lys Lys Lys Tyr Val Asn Ser  
 100 105 110

Gly Thr Val Thr Leu Leu Ser Phe Ser Val Asp Ser Glu Phe Thr Phe  
 115 120 125

Val Asp Tyr Ile Lys Gly Gly Thr Gln Leu Asn Phe Thr Val Ala Ile  
 130 135 140

Asp Phe Thr Ala Ser Asn Gly Asn Pro Leu Gln Pro Thr Xaa Leu His  
 145 150 155 160

Tyr Met Ser Pro Tyr Gln Leu Ser Ala Tyr Ala Met Ala Leu Lys Ala

## 5231

165 170 175  
 Val Gly Glu Ile Ile Gln Asp Tyr Asp Ser Asp Lys Leu Phe Pro Ala  
 180 185 190  
 Tyr Gly Phe Gly  
 195  
  
 <210> 5951  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (80)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5951  
 Lys Glu His Leu Met Cys Trp Ala Phe Tyr Arg Leu Thr Leu Thr Ser  
 1 5 10 15  
 Gln Ala Glu Leu Tyr Thr Phe Ser Phe Thr Thr Ile Ser Ile Leu Ile  
 20 25 30  
 Asn Tyr Gly Phe Met Leu Leu Lys Thr Ile Tyr Asn Ala Asp His Tyr  
 35 40 45  
 Tyr Lys Cys Val Val Leu Thr Asn Cys Thr Glu Thr Ala Leu Ser Leu  
 50 55 60  
 Tyr Ser Val Trp Ile Phe Gly Glu Asn Asn Lys Cys Ser Gln Glu Xaa  
 65 70 75 80  
 Leu Leu Arg Gly Arg Leu Cys Glu Trp Ile Thr Leu Lys Ala Ala Phe  
 85 90 95  
 Glu Thr Pro Val Ser Gly Ile Ser Cys Ile Leu Ala Trp Arg Pro Asp  
 100 105 110  
 Val Asn Leu Thr Ser Ser Lys Asn Thr Arg Phe Pro  
 115 120

<210> 5952  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens

## 5232

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (118)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5952

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Phe | Ala | Gly | Leu | Cys | His | Ile | Pro | Leu | Ala | Val | Ser | Ser | Glu | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Phe | Ala | Leu | Gly | Asn | Gly | Ser | Val | Ser | His | Trp | Phe | Ile | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Leu | Phe | Gly | Ser | Gln | Ile | Cys | Phe | Phe | Glu | Asn | Leu | Ser | Trp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Leu | Gln | Val | Val | Asn | Arg | Gly | Val | Gly | Val | Gly | Gly | Gly | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Tyr | Leu | Gly | Leu | Leu | Gly | Ala | Ser | Arg | Phe | Ser | Gly | Arg | Arg | Ile |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Cys | Val | Leu | Leu | Leu | Phe | Pro | Trp | Pro | Gly | Leu | Pro | Ala | Ser | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | His | Pro | Ala | Trp | Gly | Lys | Ala | Pro | Thr | Gly | Ile | Val | Ser | Pro | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ala | Ser | Leu | Ala | Xaa | Lys | Ser | Gln | Lys | Lys | Ser | Lys | Thr | Gly | Arg |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

Lys

&lt;210&gt; 5953

&lt;211&gt; 179

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (21)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (99)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5233

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (175)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5953

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Glu | Pro | Gln | Asn | Val | Asp | Pro | Ser | Met | Val | Gln | Met | Thr | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Asp | Asp | Val | Xaa | His | Ser | Leu | Leu | Lys | Gly | Glu | Asn | Ile | Gly | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Ser | Arg | Arg | Arg | Ser | Arg | Ala | Asn | Gln | Asn | Val | Asn | Ala | Val | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | His | Tyr | Thr | Arg | Ala | Gln | Ala | Asn | Ser | Pro | Arg | Pro | Ala | Met | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Gln | Ala | Ala | Val | Pro | Lys | Gln | Asn | Thr | His | Gln | Gln | Gln | Gln | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Arg | Ser | Ile | Arg | Pro | Asn | Lys | Arg | Lys | Gly | Ser | Asp | Ser | Ser | Ile | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asp | Glu | Xaa | Lys | Met | Lys | Glu | Glu | Lys | Tyr | Asp | Tyr | Ile | Ser | Arg | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Glu | Asn | Pro | Lys | Gly | Lys | Asn | Lys | His | Leu | Met | Asn | Lys | Arg | Arg | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Pro | Glu | Glu | Asp | Glu | Lys | Lys | Leu | Asn | Met | Lys | Arg | Leu | Arg | Thr | Asp |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asn | Val | Ser | Asp | Phe | Ser | Glu | Ser | Ser | Asp | Ser | Glu | Asn | Ser | Asn | Lys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Arg | Ile | Ile | Asp | Asn | Ser | Ser | Glu | Gln | Lys | Pro | Glu | Asn | Glu | Xaa | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Lys | Lys | Tyr |     |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 5954

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

## 5234

&lt;222&gt; (32)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5954

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Phe | Cys | Val | Val | Gln | Leu | Arg | Thr | Cys | Phe | Ser | Arg | Gln | Arg | 1   | 5   | 10  | 15  |
| Phe | Lys | Ile | Ser | Gly | Asp | Gly | Ile | Arg | Asn | Gly | Asn | Ala | Glu | Arg | Xaa | 20  | 25  | 30  |     |
| Gly | Arg | Gly | Gly | Leu | Tyr | Pro | Gly | His | Pro | Gln | Gly | Gly | Arg | Arg | Ala | 35  | 40  | 45  |     |
| Lys | Lys | Arg | Gln | Ala | Glu | Gln | Leu | Ser | Ala | Ala | Gly | Glu | Gly | Gly | Asp | 50  | 55  | 60  |     |
| Ala | Gly | Arg | Met | Asp | Thr | Glu | Glu | Ala | Arg | Pro | Ala | Lys | Arg | Pro | Val | 65  | 70  | 75  | 80  |
| Phe | Pro | Pro | Leu | Cys | Gly | Asp | Gly | Leu | Leu | Ser | Gly | Lys | Glu | Glu | Thr | 85  | 90  | 95  |     |
| Arg | Lys | Ile | Pro | Val | Pro | Ala | Asn | Arg | Tyr | Thr | Pro | Leu | Lys | Glu | Asn | 100 | 105 | 110 |     |
| Trp | Met | Lys | Ile | Phe | Thr | Pro | Ile | Val | Glu | His | Leu | Gly | Leu | Gln | Ile | 115 | 120 | 125 |     |
| Arg | Phe | Asn | Leu | Lys | Ser | Arg | Asn | Val | Glu | Ile | Arg | Thr | Cys | Lys | Glu | 130 | 135 | 140 |     |
| Thr | Lys | Asp | Val | Ser | Ala | Leu | Thr | Lys | Ala | Ala | Asp | Phe | Val | Lys | Ala | 145 | 150 | 155 | 160 |
| Phe | Ile | Leu | Gly | Phe | Gln | Val | Glu | Asp | Ala | Leu | Ala | Leu | Ile | Arg | Leu | 165 | 170 | 175 |     |
| Asp | Asp | Leu | Phe | Leu | Glu | Ser | Phe | Glu | Ile | Thr | Asp | Val | Lys | Pro | Leu | 180 | 185 | 190 |     |
| Lys | Gly | Asp | His | Leu | Ser | Arg | Ala | Ile | Gly | Arg | Ile | Ala | Gly | Lys | Gly | 195 | 200 | 205 |     |
| Gly | Lys | Thr | Lys | Phe | Thr | Ile | Glu | Asn | Val | Thr | Arg | Thr | Arg | Ile | Val | 210 | 215 | 220 |     |
| Leu | Ala | Asp | Val | Lys | Val | His | Ile | Leu | Gly | Ser | Phe | Gln | Asn | Ile | Lys | 225 | 230 | 235 | 240 |
| Met | Ala | Arg | Thr | Ala | Ile | Cys | Asn | Leu | Ile | Leu | Gly | Asn | Pro | Pro | Ser | 245 | 250 | 255 |     |

## 5235

Lys Val Tyr Gly Asn Ile Arg Ala Val Ala Ser Arg Ser Ala Asp Arg  
                   260                                  265                                  270

Phe

<210> 5955

<211> 92

<212> PRT

<213> Homo sapiens

<400> 5955

Arg Met Glu Arg Ser Leu Lys Gly Ile Phe Ile Lys Gln Val Leu Glu  
       1                                  5                                  10                                  15

Asp Ser Pro Ala Gly Lys Thr Asn Ala Leu Lys Thr Gly Asp Lys Ile  
                   20                                  25                                  30

Leu Glu Val Ser Gly Val Asp Leu Gln Asn Ala Ser His Ser Glu Ala  
                   35                                  40                                  45

Val Glu Ala Ile Lys Asn Ala Gly Asn Pro Val Val Phe Ile Val Gln  
                   50                                  55                                  60

Ser Leu Ser Ser Thr Pro Arg Val Ile Pro Asn Val His Asn Lys Ala  
       65                                  70                                  75                                  80

Asn Lys Ile Thr Gly Asn Gln Asn Gln Asp Thr Gln  
                                   85                                  90

<210> 5956

<211> 203

<212> PRT

<213> Homo sapiens

<400> 5956

Asn Ser Ala Arg Gly Asp Gln Glu Ser Thr Cys Ala Glu Val Leu Val  
       1                                  5                                  10                                  15

Ile Trp Ser Leu Phe Pro Ser Gly Tyr Gln Leu Pro Ser Ala Ala Gln  
                   20                                  25                                  30

Ala Val Val Pro Glu Ala Arg Gly Arg Ser Gln Thr Cys Gly Asn Phe  
                   35                                  40                                  45

Ala Val Tyr Leu Gln Gly Cys Cys Phe Gln Gln Asp Pro Lys Leu Glu



## 5236

|   |     |     |
|---|-----|-----|
| 50  | 55  | 60  |
| Lys Glu Glu Glu Glu Thr Asp Pro Ile Ser Ala Arg Ser His Cys Ile |     |     |
| 65  | 70  | 75  |
| Gln Arg Arg Ile Ser Lys Lys Glu Lys Lys Glu Gly Arg Glu Val Asp |     |     |
| 85  | 90  | 95  |
| Arg Tyr Lys Met Lys Ser Cys Gln Lys Met Glu Gly Lys Pro Glu Asn |     |     |
| 100   | 105 | 110 |
| Glu Ser Glu Pro Lys His Glu Glu Glu Pro Lys Pro Glu Glu Lys Pro |     |     |
| 115   | 120 | 125 |
| Glu Glu Glu Glu Lys Leu Glu Glu Glu Ala Lys Ala Lys Gly Thr Phe |     |     |
| 130   | 135 | 140 |
| Arg Glu Arg Leu Ile Gln Ser Leu Gln Glu Phe Lys Glu Asp Ile His |     |     |
| 145   | 150 | 155 |
| Asn Arg His Leu Ser Asn Glu Asp Met Phe Arg Glu Val Asp Glu Ile |     |     |
| 165   | 170 | 175 |
| Asp Glu Ile Arg Arg Val Arg Asn Lys Leu Ile Val Met Arg Trp Lys |     |     |
| 180   | 185 | 190 |
| Val Asn Arg Asn His Pro Tyr Pro Tyr Leu Met                     |     |     |
| 195   | 200 |     |

&lt;210&gt; 5957

&lt;211&gt; 77

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (42)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (59)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5237

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (71)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5957

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ala | Leu | Cys | Thr | Asn | Cys | Phe | Ser | Pro | Ser | Pro | Leu | Asp | Leu | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Lys | His | Pro | Val | Leu | Lys | Leu | Ile | Cys | Cys | Ser | Phe | Val | Asn | Ile |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Arg | Phe | Ser | Leu | Arg | Val | Arg | Xaa | Asn | Ile | Ser | Glu | Pro | Lys |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Tyr | Thr | Thr | Leu | Ala | Tyr | Tyr | Ser | Xaa | Xaa | Phe | Lys | Gly | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ile | Phe | Gly | Ser | His | Xaa | Lys | Ser | Val | Phe | Ile | Met |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |

&lt;210&gt; 5958

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5958

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Asn | Asp | His | Lys | Ile | Ala | Trp | Lys | Ile | Val | Ile | Gln | Ile | Ser | Thr |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Ser | Xaa | Pro | Lys | Phe | Phe | Phe | Pro | Met | Ile | Lys | Val | Val | Asp |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

&lt;210&gt; 5959

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5959

## 5238

Asn Gln Val Tyr Phe Leu Met Ala Phe Ile Thr Leu Thr His Lys Val  
 1 5 10 15  
 Thr Asp Gln Cys Ile Ser Tyr Gly Tyr Arg Pro Arg Ala Leu Glu Gly  
 20 25 30  
 Gly Gly Leu Leu Lys His Met Gln Lys Lys Lys Lys Lys Lys Phe Cys  
 35 40 45  
 Ile Tyr Asn His Phe Asn Leu Leu  
 50 55

<210> 5960  
 <211> 82  
 <212> PRT  
 <213> Homo sapiens

<400> 5960  
 Gly Tyr Val Cys Glu Phe Leu Gly Asn Leu Ser Val Leu Asp Ala Ser  
 1 5 10 15  
 Leu Gln Gln Gly Pro Leu Leu Ala Met Asp Gly Pro Gly Arg Ser Leu  
 20 25 30  
 Glu Ile Thr His Leu Lys Asn Glu Gly Pro Met Lys Val Phe Gly Cys  
 35 40 45  
 Leu Leu Met Pro Leu Leu Leu Thr Leu Leu Phe Ala Tyr Phe Gln Asn  
 50 55 60  
 Ile Ile Lys Cys Gln His Ile Ile Ser Glu Arg Gln Val Gly Val Gly  
 65 70 75 80  
 Glu Lys

<210> 5961  
 <211> 77  
 <212> PRT  
 <213> Homo sapiens

<400> 5961  
 Phe Val Thr Cys His Asn Thr Lys Gln Val Thr Glu Glu Thr Ile Met  
 1 5 10 15  
 Gly Pro Arg Gly Arg Cys Leu Tyr His Val Asp Lys Ile Gln Ser Ser  
 20 25 30

## 5239

Leu Phe Gln Thr Lys His Phe Ala Leu Glu Thr Phe Glu Thr Ser Met  
                   35                                  40                                  45

Ala Val Glu Tyr Ser Arg Asp Asp Leu Lys Ile Leu Glu Ala Val Glu  
           50                                  55                                  60

Val Pro Val Val Gly Ala Arg His Gly Ser Gly Asp Pro  
       65                                  70                                  75

<210> 5962

<211> 170

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (170)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5962

Ala Asp Ala Trp Val Asp Tyr Ser Glu Asp Lys Ser Ser Trp Asp Asn  
       1                                  5                                  10                                  15

Gln Gln Glu Asn Pro Pro Pro Thr Lys Lys Ile Gly Lys Lys Pro Val  
                   20                                  25                                  30

Ala Lys Met Pro Leu Arg Arg Pro Lys Met Lys Lys Thr Pro Glu Lys  
           35                                  40                                  45

Leu Asp Asn Thr Pro Ala Ser Pro Pro Arg Ser Pro Ala Glu Pro Asn  
       50                                  55                                  60

Asp Ile Pro Ile Ala Lys Gly Thr Tyr Thr Phe Asp Ile Asp Lys Trp  
       65                                  70                                  75                                  80

Asp Asp Pro Asn Phe Asn Pro Phe Ser Ser Thr Ser Lys Met Gln Glu  
                                   85                                  90                                  95

Ser Pro Lys Leu Pro Gln Gln Ser Tyr Asn Phe Asp Pro Asp Thr Cys  
                   100                                  105                                  110

Asp Glu Ser Val Asp Pro Phe Lys Thr Ser Ser Lys Thr Pro Ser Ser  
           115                                  120                                  125

Pro Ser Lys Ser Pro Ala Ser Phe Glu Ile Pro Ala Ser Ala Met Glu  
       130                                  135                                  140

Ala Asn Gly Val Asp Gly Asp Gly Leu Asn Lys Pro Ala Lys Lys Lys

## 5240

145                                      150                                      155                                      160  
Lys Thr Pro Leu Lys Thr Glu His Leu Xaa  
   165                                      170

<210> 5963

<211> 55

<212> PRT

<213> Homo sapiens

<400> 5963

Leu Ile Ala Gly Ile Gln His Gly Cys Gln Asp Ile Gly Ala Arg Ser  
1                                      5                                      10                                      15

Leu Ser Val Leu Arg Ser Met Met Tyr Ser Gly Glu Leu Lys Phe Glu  
   20                                      25                                      30

Lys Arg Thr Met Ser Ala Gln Ile Glu Gly Gly Val His Gly Leu His  
   35                                      40                                      45

Ser Tyr Glu Lys Arg Leu Tyr  
   50                                      55

<210> 5964

<211> 493

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (112)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (135)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (156)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (165)

<223> Xaa equals any of the naturally occurring L-amino acids

## 5241

<220>  
 <221> SITE  
 <222> (359)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (434)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (436)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (468)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (471)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (473)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (488)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5964  
 Val Ile Arg Gly Gly Ser Asn Arg Arg Gly Glu Gly Glu Val Ile Pro  
     1                    5                    10                    15  
 Glu Glu Ser Arg Leu Gly Arg Thr Arg Trp Pro Gly Asn Arg Val Ile  
                     20                    25                    30  
 Arg Glu Met Lys Pro Thr Gly Thr Asp Pro Arg Ile Leu Ser Ile Ala  
                     35                    40                    45  
 Ala Glu Val Ala Lys Ser Pro Glu Gln Asn Val Pro Val Ile Leu Leu  
                     50                    55                    60  
 Lys Leu Lys Glu Ile Ile Asn Ile Thr Pro Leu Gly Ser Ser Glu Leu  
     65                    70                    75                    80

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|--|
| Lys | Lys | Ile | Lys | Gln | Asp | Ile | Tyr | Cys | Tyr | Asp | Leu | Ile | Gln | Tyr | Cys |     |  |     |  |
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     |     | 95  |  |     |  |
| Leu | Leu | Val | Leu | Ser | Gln | Asp | Tyr | Ser | Arg | Ile | Gln | Gly | Gly | Trp | Xaa |     |  |     |  |
|     |     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |     | 110 |  |     |  |
| Thr | Ile | Ser | Gln | Leu | Thr | Gln | Ile | Leu | Ser | His | Cys | Cys | Val | Gly | Leu |     |  |     |  |
|     |     |     |     | 115 |     |     |     |     |     | 120 |     |     |     |     |     | 125 |  |     |  |
| Glu | Pro | Gly | Glu | Asp | Ala | Xaa | Glu | Phe | Tyr | Asn | Glu | Leu | Leu | Pro | Ser |     |  |     |  |
|     |     |     |     | 130 |     |     |     |     |     | 135 |     |     |     |     |     | 140 |  |     |  |
| Ala | Ala | Glu | Asn | Phe | Leu | Val | Leu | Gly | Arg | Gln | Xaa | Gln | Thr | Cys | Phe |     |  |     |  |
| 145 |     |     |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     |  | 160 |  |
| Ile | Asn | Ala | Ala | Xaa | Ala | Glu | Glu | Lys | Asp | Glu | Leu | Leu | His | Phe | Phe |     |  |     |  |
|     |     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |     | 175 |  |     |  |
| Gln | Ile | Val | Thr | Asp | Ser | Leu | Phe | Trp | Leu | Leu | Gly | Gly | His | Val | Glu |     |  |     |  |
|     |     |     |     | 180 |     |     |     |     |     | 185 |     |     |     |     |     | 190 |  |     |  |
| Leu | Ile | Gln | Asn | Val | Leu | Gln | Ser | Asp | His | Phe | Leu | His | Leu | Leu | Gln |     |  |     |  |
|     |     |     |     | 195 |     |     |     |     |     | 200 |     |     |     |     |     | 205 |  |     |  |
| Ala | Asp | Asn | Val | Gln | Ile | Gly | Ser | Ala | Val | Met | Met | Met | Leu | Gln | Asn |     |  |     |  |
|     |     |     |     | 210 |     |     |     |     |     | 215 |     |     |     |     |     | 220 |  |     |  |
| Ile | Leu | Gln | Ile | Asn | Ser | Gly | Asp | Leu | Leu | Arg | Ile | Gly | Arg | Lys | Ala |     |  |     |  |
| 225 |     |     |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     |     |  | 240 |  |
| Leu | Tyr | Ser | Ile | Leu | Asp | Glu | Val | Ile | Phe | Lys | Leu | Phe | Ser | Thr | Pro |     |  |     |  |
|     |     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     |     | 255 |  |     |  |
| Ser | Pro | Val | Ile | Arg | Ser | Thr | Ala | Thr | Lys | Leu | Leu | Leu | Leu | Met | Ala |     |  |     |  |
|     |     |     |     | 260 |     |     |     |     |     | 265 |     |     |     |     |     | 270 |  |     |  |
| Glu | Ser | His | Gln | Glu | Ile | Leu | Ile | Leu | Leu | Arg | Gln | Ser | Thr | Cys | Tyr |     |  |     |  |
|     |     |     |     | 275 |     |     |     |     |     | 280 |     |     |     |     |     | 285 |  |     |  |
| Lys | Gly | Leu | Arg | Arg | Leu | Leu | Ser | Lys | Gln | Glu | Thr | Gly | Thr | Glu | Phe |     |  |     |  |
| 290 |     |     |     |     |     | 295 |     |     |     |     |     | 300 |     |     |     |     |  |     |  |
| Ser | Gln | Glu | Leu | Arg | Gln | Leu | Val | Gly | Leu | Leu | Ser | Pro | Met | Val | Tyr |     |  |     |  |
| 305 |     |     |     |     |     | 310 |     |     |     |     |     | 315 |     |     |     |     |  | 320 |  |
| Gln | Glu | Val | Glu | Glu | Gln | Lys | Leu | His | Gln | Ala | Ala | Cys | Leu | Ile | Gln |     |  |     |  |
|     |     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     |     | 335 |  |     |  |
| Ala | Tyr | Trp | Lys | Gly | Phe | Gln | Thr | Arg | Lys | Arg | Leu | Lys | Lys | Leu | Pro |     |  |     |  |
| 340 |     |     |     |     |     | 345 |     |     |     |     |     | 350 |     |     |     |     |  |     |  |

## 5243

Ser Ala Val Ile Ala Leu Xaa Arg Ser Phe Arg Ser Lys Arg Ser Lys  
355 360 365

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Leu | Glu | Ile | Asn | Arg | Gln | Lys | Glu | Glu | Glu | Asp | Leu | Lys | Leu |
| 370 |     |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |

Gln Leu Gln Leu Gln Arg Gln Arg Ala Met Arg Leu Ser Arg Glu Leu  
385 390 395 400

Gln Leu Ser Met Leu Glu Ile Val His Pro Gly Gln Val Glu Lys His  
405 410 415

Tyr Arg Glu Met Gly Arg Glu Ile Ser Thr Asp Tyr Pro Glu Thr Leu  
420 425 430

Glu Xaa Val Xaa Gly Lys Glu Lys Phe Ser Pro Thr Glu Ala Val Ser  
435 440 445

His Arg Ser Ile Lys Ala Thr Val Thr Leu Gln Lys Ser Lys Arg Phe  
450 455 460

Lys Phe Leu Xaa Glu Ile Xaa Arg Xaa Glu Lys Arg Lys Leu Phe Cys  
465 470 475 480

Leu Pro Trp Ala Lys Gly Pro Xaa Lys Glu Thr Ser Thr  
485 490

<210> 5965

<211> 47

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (5)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5965

Leu Phe Val Cys Xaa Phe Leu Val Ala Arg Ser Asp Pro Arg Ile Phe  
1 5 10 15

Leu Leu Ser Arg Glu Thr Arg Arg Ile Met Arg Leu Phe Leu Val Ala  
20 25 30

Phe Gln Glu Tyr Glu Glu Lys Asn Gly Ser Gln Ser Gly Phe Glu  
35 40 45



## 5244

&lt;210&gt; 5966

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5966

Leu His Lys Thr Leu Val Arg Tyr Gln Leu Leu His Arg Glu Ser Ser  
1 5 10 15

Tyr Thr Ile Pro Tyr Ile Phe Ile Tyr Leu Leu Phe Tyr Tyr Ser Arg  
20 25 30

Ile Thr Lys Leu Asp Ala Leu Ser Gln Phe Phe Ala Thr Glu Asn Tyr  
35 40 45

Leu Phe Leu Leu Pro Phe His Thr Pro Cys Ile Tyr Asp Gln Pro Leu  
50 55 60

His  
65

&lt;210&gt; 5967

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5967

Ala Lys Asn Ile Lys Gly Arg Glu Ile Gly Ile Gln Gly Asp Ser Val  
1 5 10 15

Gln Glu Ser Lys Pro Gly Ile Cys Leu Cys Gly Arg Pro Asn His Tyr  
20 25 30

Tyr Leu Asn Pro Leu Arg Lys Ala Phe Pro Ala Phe His Asn Ser Gly  
35 40 45

Ser Ser Phe Ile Lys Trp Glu Thr His Asn Cys Pro Thr Tyr Leu Thr  
50 55 60

Gly Val Leu  
65

&lt;210&gt; 5968

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5245

&lt;400&gt; 5968

```

Leu Glu Thr Ser Ala Val Tyr Ile Ser Leu Tyr Ser Phe Phe Ser Pro
 1             5             10             15

Leu Pro Met Met Phe Arg Asn Thr Thr Ile Leu Phe Ala Lys His Ser
          20             25             30

Asn Tyr Leu Ile Ser Lys Gln Val Leu Glu Tyr His Arg Asn His Lys
          35             40             45

Thr Ala His Gln Asn Met Pro His Ser Thr Ser Ser Glu Gln Ser Gly
          50             55             60

Lys Arg Thr Ser Arg Ser Trp Lys Ser Gly Leu Val Leu Ser Arg Ser
 65             70             75             80

Thr Lys Asn Leu Asn Ile Ser Asp Asn His Asn Thr Ser Leu Thr Trp
          85             90             95

Glu Arg Ala Val Ile Ile Phe His Arg Gly Gln Asp Gly Ser Leu Asp
          100            105            110

Glu Glu Val Asp Met Pro Phe Pro Asn Ser Arg Lys
          115            120

```

&lt;210&gt; 5969

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5969

```

Ile Cys Pro Arg Ser Pro Ser Lys Val Ser Val Ala Leu Arg Val Arg
 1             5             10             15

Thr Leu Ile Arg Leu Gly Arg Val Leu Glu Ser Leu Arg Arg Gln Glu
          20             25             30

Glu Cys Ala Glu Leu Ser Val Ser Gly Arg Leu Ile His Cys Trp Ala
          35             40             45

His Ile Lys Ala Pro Met Gly Ser Arg Pro Asp Cys Thr Trp Leu Phe
          50             55             60

Cys Trp Lys Lys Ser Met Ala Ala Gln Arg Thr Lys Ile Ser Ser Gly
 65             70             75             80

Lys Ala Ser Phe Asp Cys Gln
          85

```

## 5246

&lt;210&gt; 5970

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5970

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Arg | Xaa | Gln | Val | Phe | Asn | Ser | Thr | Asn | Ile | Phe | Phe | Ser | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Phe | Phe | Cys | Leu | Leu | Tyr | Thr | Asp | Ile | Pro | Thr | Leu | Ala | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gln | Arg | Gly | Ser | Tyr | Leu | Arg | Asn | Thr | Ala | Asp | Phe | Glu | Tyr | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Gln | Ser | His | Leu | Ser | Glu | Ala |
|     | 50  |     |     |     |     | 55  |     |     |

&lt;210&gt; 5971

&lt;211&gt; 184

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (183)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5971

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Lys | Lys | Thr | Leu | Lys | Lys | Lys | Ile | Pro | Lys | Tyr | His | Gln | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Glu | Lys | Arg | Arg | Gln | Lys | Pro | Leu | Gly | Gly | Phe | Gly | Lys | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Lys | Glu | Lys | Glu | Pro | Lys | Thr | Lys | Gly | Lys | Asp | Ala | Lys | Asp | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Asp | Ser | Ser | Ala | Ala | Gln | Pro | Gly | Val | Ala | Phe | Ser | Val | Asp |
|     |     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |

## 5247

Asn Thr Ile Lys Arg Pro Asn Pro Ala Pro Gly Thr Arg Lys Lys Ser  
 65 70 75 80  
 Ser Asn Ala Glu Val Ile Lys Glu Leu Asn Lys Cys Arg Glu Glu Asn  
 85 90 95  
 Ser Met Arg Leu Asp Leu Ser Lys Arg Ser Ile His Ile Leu Pro Ser  
 100 105 110  
 Ser Ile Lys Glu Leu Thr Gln Leu Thr Glu Leu Tyr Leu Tyr Ser Asn  
 115 120 125  
 Lys Leu Gln Ser Leu Pro Ala Glu Val Gly Cys Leu Val Asn Leu Met  
 130 135 140  
 Thr Leu Ala Leu Ser Glu Asn Ser Leu Thr Ser Leu Pro Asp Ser Leu  
 145 150 155 160  
 Asp Asn Leu Lys Lys Leu Arg Met Leu Asp Leu Arg His Asn Lys Leu  
 165 170 175  
 Arg Glu Ile Pro Ser Val Xaa Val  
 180

&lt;210&gt; 5972

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5972

Ala His Pro Thr Arg Asn Tyr Val Lys Lys Lys Phe Lys Lys Glu Phe  
 1 5 10 15  
 Lys Gly Asp Tyr Ser Val Thr Val Thr Pro Gly Lys Leu Arg Thr Leu  
 20 25 30  
 Cys Glu Ile Asp Trp Pro Ala Leu Glu Val Gly Trp Pro Ser Glu Gly  
 35 40 45  
 Ser Leu Asp Arg Ser Leu Val Ser Lys Val  
 50 55

&lt;210&gt; 5973

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5248

&lt;400&gt; 5973

Gly Gln Gln Phe Glu Thr Ser Leu Thr Ile Ser Thr Lys Cys Thr Lys  
 1 5 10 15

Val Ser Trp Ala Trp Trp Arg Ala Pro Val Ile Pro Ala Thr Trp Glu  
 20 25 30

Thr Asp Ala  
 35

&lt;210&gt; 5974

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5974

Arg Asn Ser Gly Phe Cys Cys Asn Arg Phe Ile Phe Leu Leu Phe Ser  
 1 5 10 15

Pro Ile Leu Ala Gln Ser Gly Ala Ile Val Leu Leu Val Arg Pro Ser  
 20 25 30

Leu Lys Met Arg Ser Arg Glu Ala Gly Pro Lys Leu Arg Arg Ile Gln  
 35 40 45

Glu Pro Ala Asn Gly Ser Pro Gly Ala Val Ser Glu Thr Gly Gly Tyr  
 50 55 60

Arg Glu Glu Arg Leu Ser Asp Ala Glu Ile Met Gly Lys Leu Leu Ala  
 65 70 75 80

Trp Leu Ala Val Gly Met  
 85

&lt;210&gt; 5975

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (22)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

## 5249

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5975

Ile Phe Ser Asn Leu Val Phe Phe Tyr Ile Ile Ile Ala Ser Leu Lys

1 5 10 15

Ile Val Leu Gln Ala Xaa His Gly Trp Val Thr Pro Val Tyr Leu Thr

20 25 30

Leu Trp Glu Ala Glu Ala Gly Lys His Leu Lys Ser Gly Xaa Gln Asn

35 40 45

Asn Pro Gly His Trp

50

<210> 5976

<211> 27

<212> PRT

<213> Homo sapiens

<400> 5976

Cys Leu Gly Ala Tyr Ala Asp Tyr Ser Leu Arg Gly Gly Val Glu Arg

1 5 10 15

Arg Arg Arg Tyr Ala Gly Arg Arg Val Leu Cys

20 25

<210> 5977

<211> 91

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (52)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (69)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (86)

<223> Xaa equals any of the naturally occurring L-amino acids

## 5250

&lt;400&gt; 5977

Val Ser Arg Leu Val Ser Lys Glu Phe Ser Lys Ser Trp Ser Cys Gly  
1 5 10 15

Gly Cys Ser Tyr Ala Ala Gly Ala Val Thr Glu Arg Gln Glu Gly Leu  
20 25 30

Gly Gly Lys Gly Arg Arg Leu Asn Gln Ala Pro Ala Trp Thr Trp Ala  
35 40 45

Cys Val Leu Xaa Ser His Leu Ser Ser Arg Thr Gln Val Gly Lys Ser  
50 55 60

Leu Ser Gly His Xaa Pro Leu Gly Gly Val Gly Leu Ser Val Pro Phe  
65 70 75 80

Leu Ala Val Thr Ser Xaa Cys Ala Arg Val Glu  
85 90

&lt;210&gt; 5978

&lt;211&gt; 224

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (107)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (117)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (127)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (129)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (135)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5251

<220>  
 <221> SITE  
 <222> (140)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (151)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (152)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (213)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (216)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5978  
 Ala Leu Val Ser Val Leu Thr Lys Glu Tyr Glu Asp Ala Val Ser Ile  
 1 5 10 15  
 Ala Thr Ala Val Leu Val Val Val Thr Val Ala Phe Ile Gln Glu Tyr  
 20 25 30  
 Arg Ser Glu Lys Ser Leu Glu Glu Leu Thr Lys Leu Val Pro Pro Glu  
 35 40 45  
 Cys Asn Cys Leu Arg Glu Gly Lys Leu Gln His Leu Leu Ala Arg Glu  
 50 55 60  
 Leu Val Pro Gly Asp Val Val Ser Leu Ser Ile Gly Asp Arg Ile Pro  
 65 70 75 80  
 Ala Asp Ile Arg Leu Thr Glu Val Thr Asp Leu Leu Val Asp Glu Ser  
 85 90 95  
 Ser Phe Thr Gly Glu Ala Glu Pro Cys Ser Xaa Thr Asp Ser Pro Leu  
 100 105 110  
 Thr Gly Gly Gly Xaa Leu Thr Thr Leu Ser Asn Ile Val Phe Xaa Gly  
 115 120 125  
 Xaa Leu Val Gln Tyr Gly Xaa Gly Gln Gly Val Xaa Ile Gly Thr Gly



## 5252

|   |     |         |
|---|-----|---------|
| 130   | 135 | 140     |
| Glu Ser Ser Gln Phe Gly Xaa Xaa Phe Lys Met Met Gln Ala Glu Glu |     |         |
| 145   | 150 | 155 160 |
| Thr Pro Lys Thr Pro Leu Gln Lys Ser Met Asp Arg Leu Gly Lys Gln |     |         |
|   | 165 | 170 175 |
| Leu Thr Leu Phe Ser Phe Gly Ile Ile Gly Leu Ile Met Leu Ile Gly |     |         |
|   | 180 | 185 190 |
| Trp Ser Gln Gly Lys Gln Leu Leu Ser Met Phe Thr Ile Gly Val Ser |     |         |
|   | 195 | 200 205 |
| Leu Ala Val Ala Xaa Ile Ser Xaa Gly Ser Ala His Ser Ser Ser Trp |     |         |
|   | 210 | 215 220 |

<210> 5979  
 <211> 155  
 <212> PRT  
 <213> Homo sapiens

<400> 5979  
 Pro Cys Cys Ile Trp Lys Ala Lys Trp Gly His Glu Glu Gly Trp Lys  
 1 5 10 15  
 Gly Gln Gly Val Met Ala Ala Tyr Leu Val Ser Pro Thr Pro Pro Val  
 20 25 30  
 Leu Gly Glu Pro Ser Cys Tyr Thr Gly Ser Ser Pro Arg Ser Ser Phe  
 35 40 45  
 Leu Ser Pro Thr Ser Trp Trp Arg Leu Gln Gly Arg Pro Glu Ser Trp  
 50 55 60  
 Thr Glu Arg Val Thr Gly Gly Val Gly Asp Lys His Gln Thr Ser Ile  
 65 70 75 80  
 Val Cys Pro Asp Leu Gly Val Ile Gly Gly Met Gly Trp Glu Arg Val  
 85 90 95  
 Ser Trp Tyr Ser His Gly Leu Ile Phe Phe Val Ser Ile Pro Phe Ile  
 100 105 110  
 Ser Leu Cys Leu Asn Arg Gly Gly Gly Val Val Thr Gly Asn Lys Asp  
 115 120 125

## 5253

Leu Arg Ser Ser Ala Pro Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
 130 135 140

Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
 145 150 155

<210> 5980

<211> 90

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (22)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (41)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5980

Ile Arg His Glu Gly Thr Leu Pro Leu Gln Arg Val Arg Ala Leu Leu  
 1 5 10 15

His Pro Gln Arg Ser Xaa Ala Lys His Leu Arg Gly His Ala Ser Val  
 20 25 30

Arg Pro Cys Arg Cys Asn Glu Cys Xaa Lys Ser Phe Ser Arg Arg Asp  
 35 40 45

His Leu Val Arg His Gln Arg Thr His Thr Gly Glu Lys Pro Phe Thr  
 50 55 60

Cys Pro Thr Cys Gly Lys Ser Phe Ser Arg Gly Tyr His Leu Ile Arg  
 65 70 75 80

His Gln Arg Thr His Ser Glu Lys Thr Ser  
 85 90

<210> 5981

<211> 54

<212> PRT

<213> Homo sapiens

<220>

## 5254

&lt;221&gt; SITE

&lt;222&gt; (41)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5981

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Ser | Pro | Gly | Val | Val | Gly | Arg | Cys | Lys | Leu | Lys | Gly | Thr | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Gly | Arg | Gly | Glu | Asp | Asp | Ser | Asp | Pro | Ser | Pro | Val | Gly |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Arg | Ile | Thr | Gln | Glu | Leu | Arg | Xaa | Arg | Glu | Glu | Gly | Xaa | Arg | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Leu | Leu | Gln | Gly |
|     |     | 50  |     |     |     |

&lt;210&gt; 5982

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5982

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Gln | Pro | Ala | Pro | Leu | Val | Pro | Pro | Cys | Ser | Ser | Ser | His | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Arg | Pro | His | Thr | Leu | Thr | Arg | Thr | Leu | Thr | His | Arg | Ser | Leu | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Met | Arg | Trp | Gly | Tyr | Asp | Arg | Ser | Leu | Arg | Leu | Val | Ser | Xaa | Ser |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Gln | Pro | Pro | Pro | Gly | Phe | Gln | Pro | Ile | Leu | Phe | Ala | Ala | Gly |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Thr | Leu | Pro | Tyr | Ser | Gln | Leu | Leu | Phe | Pro | Ala | Asp | Gly | Glu |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Ser | Ala | Ala | Tyr | Pro | Pro | Thr | Pro | Leu | Gln | Gly | Val | Glu | Asp |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5255

85

90

95

&lt;210&gt; 5983

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5983

Glu Lys Thr Gln Val Cys Asp Ile Ser Val Ile Pro Lys Asn Ile Leu  
 1 5 10 15

Gly Phe Leu Phe Val Phe Leu Phe Phe Gly Phe Phe Phe Phe Thr Ala  
 20 25 30

Glu Asn Trp Trp Tyr Phe His Ile His Ser Val Ser Ile Gln Phe Gln  
 35 40 45

Tyr Pro His Leu Met Arg Lys Lys Cys Phe Thr Asn Glu Gly Gly Ile  
 50 55 60

Leu Lys Leu Ala Val Met Leu Gly Trp Arg Lys Phe Gly Ile  
 65 70 75

&lt;210&gt; 5984

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5984

Lys Ile Thr Met Trp Met Ala Val Ser His Ile Thr Asp Val Glu Ser  
 1 5 10 15

Ile Ile Leu Tyr Leu Tyr Phe Gln Ile Asn Lys Phe Val Lys Gly Phe  
 20 25 30

His Pro Leu Leu Trp Ser Arg Lys Met Leu Glu Ile Tyr Ile Xaa Ile  
 35 40 45

Asp Thr Tyr Ile Cys Ile Tyr Ile Lys Lys Ile Leu Thr Thr Lys Val

## 5256

50                                      55                                      60  
 Pro Glu Pro Pro Ser Lys Val Leu Tyr Tyr Cys Ile Leu Tyr Ile Met  
 65                                      70                                      75                                      80  
 Tyr His Pro Met Trp Asn Leu  
 85

<210> 5985  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 5985  
 Asp Lys Ser Ile Lys Asn Lys Ala Glu Arg Glu Arg Arg Val Arg Glu  
 1                                      5                                      10                                      15  
 Leu Asn Ser Ser Asn Thr Lys Lys Phe Leu Glu Glu Arg Lys Arg Leu  
 20                                      25                                      30  
 Ala Met Lys Gln Ser Lys Glu Met Asp Gln Leu Lys Lys Val Gln Leu  
 35                                      40                                      45  
 Glu His Leu Glu Phe Leu Glu Lys Gln Asn Glu Gln Leu Leu Lys Ser  
 50                                      55                                      60  
 Cys His Ala Val Ser Gln Thr Gln Gly Glu Gly Asp Ala Ala Asp Gly  
 65                                      70                                      75                                      80  
 Glu Ile Gly Ser Arg Asp Gly Pro Gln Thr Ser Asn Ser Ser Met Lys  
 85                                      90                                      95  
 Leu Gln Asn Ala Asn  
 100

<210> 5986  
 <211> 216  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (96)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5986  
 Lys Ser Ser Arg Gly Asn Thr Gln Ala Thr Ser His Ser Phe Asp Val

## 5257

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Arg Val Leu Thr Gln Leu Leu Leu Asn Ser Asp His Arg Ser Thr Ala | 20  | 25  | 30  |
| Thr Val Gln Ile Cys Ser Gly Ser Val Asn Leu Lys Gly Ala Val Lys | 35  | 40  | 45  |
| Cys Arg Ala Tyr Ile His Ser Ser Lys Pro Lys Val Lys Asp Ala Val | 50  | 55  | 60  |
| Gln Ala Val Lys Arg Asp Ile Leu Asn Thr Val Ala Asp Arg Cys Glu | 65  | 70  | 75  |
| Met Leu Phe Glu Asp Leu Leu Leu Asn Glu Ile Pro Glu Lys Lys Xaa | 85  | 90  | 95  |
| Ser Glu Lys Glu Phe His Val Leu Pro Tyr Arg Val Phe Val Pro Leu | 100 | 105 | 110 |
| Pro Gly Ser Thr Val Met Leu Cys Asp Tyr Lys Phe Asp Asp Glu Ser | 115 | 120 | 125 |
| Ala Glu Glu Ile Arg Asp His Phe Met Glu Met Leu Asp His Thr Ile | 130 | 135 | 140 |
| Gln Ile Glu Asp Leu Glu Ile Ala Glu Glu Thr Asn Thr Ala Cys Met | 145 | 150 | 155 |
| Ser Ser Ser Met Asn Ser Gln Ala Ser Leu Asp Asn Thr Asp Asp Glu | 165 | 170 | 175 |
| Gln Pro Lys Gln Pro Ile Lys Thr Thr Met Leu Leu Lys Ile Gln Gln | 180 | 185 | 190 |
| Asn Ile Gly Val Ile Ala Ala Phe Thr Val Ala Val Leu Ala Ala Gly | 195 | 200 | 205 |
| Ile Ser Phe His Tyr Phe Ser Asp                                 | 210 | 215 |     |

&lt;210&gt; 5987

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5987

|   |   |   |    |    |
|---|---|---|----|----|
| Pro Phe Leu Val Ser Val Phe Pro Gly Glu Asn Glu Ala Lys Gln Glu | 1 | 5 | 10 | 15 |
|---|---|---|----|----|

## 5258

Phe Gly Phe Leu Leu Met Ser Ser Tyr Thr Ile His Ser Val Asn Phe  
                   20                                  25                                  30  
 Glu Lys Ile Tyr Pro Pro Phe Ser Leu Leu Gly Asp Ile Asn Tyr Ser  
                   35                                  40                                  45  
 Gln Glu Glu Tyr Asn Glu Leu Tyr Ser Tyr Phe Asp Leu Leu Lys Arg  
                   50                                  55                                  60  
 Cys Tyr Gln  
           65

<210> 5988  
 <211> 162  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (74)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (93)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (94)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (96)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 5988  
 Pro Ala Glu Leu Lys Cys Ala Val Thr Ser Gln Cys Glu Phe Leu Pro  
   1                                  5                                  10                                  15

Asn Ser Arg Ala Tyr His Leu Lys Lys Glu Arg Thr Glu Glu Gln Thr  
                   20                                  25                                  30

Lys Val Leu Arg Asn Glu Thr His Leu Phe Ser Leu Lys Ala Leu Arg  
                   35                                  40                                  45

Gly Gly Arg Arg Pro Ala Gln Ala Gly Gly Gly Phe Gly Gln Ser Glu

## 5259

50                                      55                                      60  
 Asp Pro Ala Arg Thr Leu Val Arg Trp Xaa Ala Ala His Leu Leu Arg  
 65                                      70                                      75                                      80  
 Ile Leu Leu Glu Ser Cys Ser Pro Arg Gly Leu Leu Xaa Xaa Trp Xaa  
                                     85                                      90                                      95  
 Lys Glu Ala Ala Trp Cys Gly Val Thr Gln Ile Ser Ile Pro Ile Cys  
                                     100                                      105                                      110  
 Cys Thr Phe Thr Leu Gln Gly Thr Cys Phe Lys Thr Asp Pro Gln Gln  
                                     115                                      120                                      125  
 Val Leu Glu Lys Cys Ile Gln Ser Glu Asp Val Cys Val Ser Val Tyr  
                                     130                                      135                                      140  
 Ile Gln Ser Ser Val Thr His Ala Pro Gln Ile Ala Ala Lys Ile Pro  
 145                                      150                                      155                                      160  
 Arg His

&lt;210&gt; 5989

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (80)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (86)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5989

Asn Cys Ala Phe Ser Gly Leu Leu Ser Ser Ile Pro Ser Phe Ser Leu  
 1                                      5                                      10                                      15  
 Leu Ser Ser Phe Gln His Val Thr Val Lys Ala Phe Ser Leu Ile Phe  
                                     20                                      25                                      30  
 Tyr His Cys Glu Tyr Val Pro Phe Glu Asn Pro Phe Ala Val Ile Phe  
                                     35                                      40                                      45  
 Val Gly Phe Gly Glu Glu Ala Val Val Asn Ala Cys Ile Ile Leu Ser



## 5260

50 55 60  
Ser Lys Cys Ser Met Leu Ala Leu Leu Ile Ser Gly Asp Val Arg Xaa  
65 70 75 80  
Gln Leu Leu Ser Leu Xaa Lys  
85

<210> 5990  
<211> 71  
<212> PRT  
<213> Homo sapiens

<400> 5990  
Arg Pro Ala Glu Asp Val Leu Gln Val Arg Glu Thr Gly Pro Gly Asn  
1 5 10 15  
Pro Ala Val Thr Glu Asp Tyr Ile Glu Phe Glu Asn Val Gly Ile Phe  
20 25 30  
Glu Asn Ala Pro Pro Lys Lys Leu Leu Met Ser Ser Gly Asn Val Arg  
35 40 45  
Arg Leu Ile Tyr Thr Asp Thr Ala Glu Glu Lys Gly Arg Arg Ile Lys  
50 55 60  
Asp Pro Val Leu Leu Pro Gly  
65 70

<210> 5991  
<211> 217  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (51)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (104)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (120)

## 5261

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (131)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (137)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5991

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Tyr | Trp | Thr | Phe | Asp | Met | Glu | Cys | Tyr | Lys | Lys | Tyr | Arg | Lys | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Gly | Ile | Tyr | Asp | Cys | Gln | Gln | Pro | Met | Leu | Ala | Ile | Thr | Asp | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Met | Ile | Lys | Thr | Val | Leu | Val | Lys | Glu | Cys | Tyr | Ser | Val | Phe | Thr |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Arg | Xaa | Pro | Phe | Gly | Pro | Val | Gly | Phe | Met | Lys | Asn | Ala | Ile | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Glu | Asp | Glu | Glu | Trp | Lys | Arg | Ile | Arg | Ser | Leu | Leu | Ser | Pro |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Phe | Thr | Ser | Gly | Lys | Leu | Lys | Glu | Met | Phe | Pro | Ile | Ile | Ala | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Gly | Asp | Val | Leu | Val | Arg | Xaa | Leu | Arg | Arg | Glu | Ala | Glu | Lys | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Pro | Val | Thr | Leu | Lys | Asp | Xaa | Phe | Gly | Ala | Tyr | Ser | Met | Asp | Val |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Thr | Xaa | Thr | Ser | Phe | Gly | Val | Xaa | Ile | Asp | Ser | Leu | Asn | Asn | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asp | Pro | Phe | Val | Glu | Ser | Thr | Lys | Lys | Phe | Leu | Lys | Phe | Gly | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Pro | Leu | Phe | Leu | Ser | Ile | Ile | Leu | Phe | Pro | Phe | Leu | Thr | Pro |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Phe | Glu | Ala | Leu | Asn | Val | Ser | Leu | Phe | Pro | Lys | Asp | Thr | Ile | Asn |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Ser | Lys | Ser | Val | Asn | Arg | Met | Lys | Lys | Ser | Arg | Leu | Asn | Asp |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

## 5262

Lys Gln Lys Val Lys Ser Asp Gly Gly  
 210 215

<210> 5992

<211> 77

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (29)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 5992

Val Pro Pro Ala Cys Cys Ala Ser Arg Val Ala Arg Leu Gly Phe Ser  
 1 5 10 15

Arg Cys Thr Cys Pro Arg Trp Pro Gly Pro Xaa Ala Xaa Arg Ala Ala  
 20 25 30

Ala Gly Ala Leu Pro Arg Gly Gln Val Arg Ile Trp Pro Arg Ser His  
 35 40 45

Pro Ser Ser Thr Ala Arg Thr Pro His Ser Leu Pro Gln Ser Ile Cys  
 50 55 60

Leu Ser Pro Met Gly Lys Leu Ile Asn Phe Ala Leu Asp  
 65 70 75

<210> 5993

<211> 68

<212> PRT

<213> Homo sapiens

<400> 5993

Lys Met Leu Asn Arg Phe His Asp Cys Leu Leu Glu Asp Phe Lys Val  
 1 5 10 15

His Cys Gly Ser Ser Arg Arg Asn Pro Val Asn His Ser Ser His Leu  
 20 25 30

## 5263

Pro Thr Gly Leu Phe Ser Asn Gly Ala Ser Cys Glu Ala Ser Gly Phe  
                   35                  40                  45

Phe Cys Cys Cys Tyr Leu Phe Phe Phe Phe Asn Ala Leu Glu Asn Thr  
           50                  55                  60

Ala Leu Gly Tyr  
   65

<210> 5994  
 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 5994  
 Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Leu Leu Ser Pro Ala  
   1                  5                  10                  15

Leu Pro Cys Thr Val His Ser Ser Ser Thr Met Ala Ser Arg Thr Pro  
           20                  25                  30

Arg Asn Cys Ala Val Leu Lys Gly Glu Val Asp Leu Thr Ala Leu Ala  
           35                  40                  45

Lys Glu Leu Arg Ala Val Glu Asp Val Arg Pro Pro His Lys Val Thr  
   50                  55                  60

Asp Tyr Ser Ser Ser Ser Glu Glu Ser Gly Thr Thr Asp Glu Glu Asp  
   65                  70                  75                  80

Asp Asp Val Glu Gln Glu Gly Ala Asp Glu Ser Thr Ser Gly Pro Glu  
                   85                  90                  95

Asp Thr Arg Ala Ala Ser Ser Leu Asn Leu Ser Asn Gly Glu Thr Glu  
           100                  105                  110

Ser Val Lys Thr Met Ile Val His Asp Asp Val Glu Ser Glu Pro Ala  
           115                  120                  125

<210> 5995  
 <211> 52  
 <212> PRT  
 <213> Homo sapiens

## 5264

&lt;400&gt; 5995

His Ser Leu Lys Tyr Ile Tyr Leu Ile Thr Phe Tyr Asn Lys Glu Leu  
 1 5 10 15

Leu Ser Pro Asn Val Ile Ser Ala His Phe Glu Ile Pro Cys Tyr Arg  
 20 25 30

Trp Ser Leu Gln Thr Arg Lys Tyr Ser Ser Tyr Tyr Val Tyr Thr Leu  
 35 40 45

Val Leu Val Leu  
 50

&lt;210&gt; 5996

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5996

Ile Ser Pro Gly Gln Ser Gly Met Leu Thr Gly Thr Asn Val Arg Asn  
 1 5 10 15

Cys Ile Val His Cys Thr Cys Cys Pro Val Pro Gln Ala Cys Gln Cys  
 20 25 30

Leu Glu Ile Leu Phe Gly Leu Leu Lys Pro Leu Phe Ile Glu Asn Phe  
 35 40 45

Cys Pro Tyr Arg Ser Val Cys Met Gly Leu Gly Lys Ser Thr Cys Val  
 50 55 60

Tyr Leu Ser Ser Glu Ala Gln Ile His Ser Asn  
 65 70 75

&lt;210&gt; 5997

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5997

Pro Asp Leu Phe Ala His Arg Glu Val Pro Leu Ser Leu His Gly Leu  
 1 5 10 15

Ser Asp Leu Ile Pro Pro His Ser Gln Phe Gln Val Val Glu Gln Asp  
 20 25 30

Glu Ala Ala Pro Ser Pro Leu Pro His Pro Asp Ser Ala Ala Glu Phe

## 5265

35 40 45  
 Ile Pro Gln Glu Arg Gly Ser Thr Asp Ser Val His Ala Cys Gly  
 50 55 60  
  
 <210> 5998  
 <211> 226  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (6)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (125)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (170)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (216)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (218)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 5998  
 Xaa Ser Ala Ser Leu Xaa Glu Gln Lys Leu Glu Leu His Arg Gly Gly  
 1 5 10 15  
 Gly Arg Ser Arg Thr Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr  
 20 25 30  
 Arg Ser Gly Gly Pro Arg Leu Pro Gln Ala Gln Lys Thr Ala Ala Leu  
 35 40 45

## 5266

Pro Arg Thr Arg Gly Ala Gly Leu Leu Glu Ser Glu Leu Arg Asp Gly  
 50 55 60  
 Ser Gly Lys Lys Val Ala Val Ala Asp Val Gln Phe Gly Pro Met Arg  
 65 70 75 80  
 Phe His Gln Asp Gln Leu Gln Val Leu Leu Val Phe Thr Lys Glu Asp  
 85 90 95  
 Asn Gln Cys Asn Gly Phe Cys Arg Ala Cys Glu Lys Ala Gly Phe Lys  
 100 105 110  
 Cys Thr Val Thr Lys Glu Ala Gln Ala Val Leu Ala Xaa Phe Leu Asp  
 115 120 125  
 Lys His His Asp Ile Ile Ile Ile Asp His Arg Asn Pro Arg Gln Leu  
 130 135 140  
 Asp Ala Glu Ala Leu Cys Arg Ser Ile Arg Ser Ser Lys Leu Ser Glu  
 145 150 155 160  
 Asn Thr Val Ile Val Gly Val Val Arg Xaa Val Asp Arg Glu Glu Leu  
 165 170 175  
 Ser Val Met Pro Phe Ile Ser Ala Gly Phe Thr Arg Arg Tyr Val Glu  
 180 185 190  
 Asn Pro Asn Ile Met Ala Cys Tyr Asn Glu Leu Leu Gln Leu Glu Phe  
 195 200 205  
 Gly Glu Gly Ala Ile Thr Thr Xaa Thr Xaa Gly Leu Leu Leu Lys Tyr  
 210 215 220  
 Ser Leu  
 225

&lt;210&gt; 5999

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 5999

Gly Xaa Val Gly Pro Ser Leu Val Ser Arg Ile Glu Asn Ile Gln Asn

## 5267

1                      5                      10                      15  
 Asp Ile Ser Leu Val Ser Phe Glu Gly Asn Asn Gln Arg Trp Ser Thr  
                          20                      25                      30  
 Gln Leu Leu Val Leu Leu Phe Thr Ile Ser His Leu Val Gln Ser Gly  
                          35                      40                      45  
 Ser Tyr Ile  
                  50

<210> 6000  
 <211> 83  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (27)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (35)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (37)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (39)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (44)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6000  
 Val Leu Asn Ser Met Leu Lys Ser Asn Trp Ile Trp Ser Arg Pro Thr  
   1                      5                      10                      15

Pro Arg Val Val Ser Gly Val Phe Phe Gln Xaa Leu Ser Gln Thr Thr  
                          20                      25                      30

Gln Val Xaa Leu Xaa Leu Xaa Ala Ala Leu Trp Xaa Gly Val Glu Gly



|      |     |     |     |     |     |      |     |     |     |     |     |      |     |     |     |  |  |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|-----|--|--|
| 35   |     |     |     |     |     | 40   |     |     |     |     |     | 45   |     |     |     |  |  |
| Gly  | Gly | Gln | Gln | Met | His | Cys  | Arg | Val | Ile | Phe | Leu | Gly  | Met | Val | Phe |  |  |
| 50   |     |     |     |     |     | 55   |     |     |     |     |     | 60   |     |     |     |  |  |
| Lys  | Lys | Pro | Glu | Ile | Phe | Thr  | Arg | Thr | Ser | Lys | Thr | Arg  | Ser | Gly | Glu |  |  |
| 65   |     |     |     |     |     | 70   |     |     |     |     |     | 75   |     |     |     |  |  |
| 80   |     |     |     |     |     | 85   |     |     |     |     |     | 90   |     |     |     |  |  |
| 95   |     |     |     |     |     | 100  |     |     |     |     |     | 105  |     |     |     |  |  |
| 110  |     |     |     |     |     | 115  |     |     |     |     |     | 120  |     |     |     |  |  |
| 125  |     |     |     |     |     | 130  |     |     |     |     |     | 135  |     |     |     |  |  |
| 140  |     |     |     |     |     | 145  |     |     |     |     |     | 150  |     |     |     |  |  |
| 155  |     |     |     |     |     | 160  |     |     |     |     |     | 165  |     |     |     |  |  |
| 170  |     |     |     |     |     | 175  |     |     |     |     |     | 180  |     |     |     |  |  |
| 185  |     |     |     |     |     | 190  |     |     |     |     |     | 195  |     |     |     |  |  |
| 200  |     |     |     |     |     | 205  |     |     |     |     |     | 210  |     |     |     |  |  |
| 215  |     |     |     |     |     | 220  |     |     |     |     |     | 225  |     |     |     |  |  |
| 230  |     |     |     |     |     | 235  |     |     |     |     |     | 240  |     |     |     |  |  |
| 245  |     |     |     |     |     | 250  |     |     |     |     |     | 255  |     |     |     |  |  |
| 260  |     |     |     |     |     | 265  |     |     |     |     |     | 270  |     |     |     |  |  |
| 275  |     |     |     |     |     | 280  |     |     |     |     |     | 285  |     |     |     |  |  |
| 290  |     |     |     |     |     | 295  |     |     |     |     |     | 300  |     |     |     |  |  |
| 305  |     |     |     |     |     | 310  |     |     |     |     |     | 315  |     |     |     |  |  |
| 320  |     |     |     |     |     | 325  |     |     |     |     |     | 330  |     |     |     |  |  |
| 335  |     |     |     |     |     | 340  |     |     |     |     |     | 345  |     |     |     |  |  |
| 350  |     |     |     |     |     | 355  |     |     |     |     |     | 360  |     |     |     |  |  |
| 365  |     |     |     |     |     | 370  |     |     |     |     |     | 375  |     |     |     |  |  |
| 380  |     |     |     |     |     | 385  |     |     |     |     |     | 390  |     |     |     |  |  |
| 395  |     |     |     |     |     | 400  |     |     |     |     |     | 405  |     |     |     |  |  |
| 410  |     |     |     |     |     | 415  |     |     |     |     |     | 420  |     |     |     |  |  |
| 425  |     |     |     |     |     | 430  |     |     |     |     |     | 435  |     |     |     |  |  |
| 440  |     |     |     |     |     | 445  |     |     |     |     |     | 450  |     |     |     |  |  |
| 455  |     |     |     |     |     | 460  |     |     |     |     |     | 465  |     |     |     |  |  |
| 470  |     |     |     |     |     | 475  |     |     |     |     |     | 480  |     |     |     |  |  |
| 485  |     |     |     |     |     | 490  |     |     |     |     |     | 495  |     |     |     |  |  |
| 500  |     |     |     |     |     | 505  |     |     |     |     |     | 510  |     |     |     |  |  |
| 515  |     |     |     |     |     | 520  |     |     |     |     |     | 525  |     |     |     |  |  |
| 530  |     |     |     |     |     | 535  |     |     |     |     |     | 540  |     |     |     |  |  |
| 545  |     |     |     |     |     | 550  |     |     |     |     |     | 555  |     |     |     |  |  |
| 560  |     |     |     |     |     | 565  |     |     |     |     |     | 570  |     |     |     |  |  |
| 575  |     |     |     |     |     | 580  |     |     |     |     |     | 585  |     |     |     |  |  |
| 590  |     |     |     |     |     | 595  |     |     |     |     |     | 600  |     |     |     |  |  |
| 605  |     |     |     |     |     | 610  |     |     |     |     |     | 615  |     |     |     |  |  |
| 620  |     |     |     |     |     | 625  |     |     |     |     |     | 630  |     |     |     |  |  |
| 635  |     |     |     |     |     | 640  |     |     |     |     |     | 645  |     |     |     |  |  |
| 650  |     |     |     |     |     | 655  |     |     |     |     |     | 660  |     |     |     |  |  |
| 665  |     |     |     |     |     | 670  |     |     |     |     |     | 675  |     |     |     |  |  |
| 680  |     |     |     |     |     | 685  |     |     |     |     |     | 690  |     |     |     |  |  |
| 695  |     |     |     |     |     | 700  |     |     |     |     |     | 705  |     |     |     |  |  |
| 710  |     |     |     |     |     | 715  |     |     |     |     |     | 720  |     |     |     |  |  |
| 725  |     |     |     |     |     | 730  |     |     |     |     |     | 735  |     |     |     |  |  |
| 740  |     |     |     |     |     | 745  |     |     |     |     |     | 750  |     |     |     |  |  |
| 755  |     |     |     |     |     | 760  |     |     |     |     |     | 765  |     |     |     |  |  |
| 770  |     |     |     |     |     | 775  |     |     |     |     |     | 780  |     |     |     |  |  |
| 785  |     |     |     |     |     | 790  |     |     |     |     |     | 795  |     |     |     |  |  |
| 800  |     |     |     |     |     | 805  |     |     |     |     |     | 810  |     |     |     |  |  |
| 815  |     |     |     |     |     | 820  |     |     |     |     |     | 825  |     |     |     |  |  |
| 830  |     |     |     |     |     | 835  |     |     |     |     |     | 840  |     |     |     |  |  |
| 845  |     |     |     |     |     | 850  |     |     |     |     |     | 855  |     |     |     |  |  |
| 860  |     |     |     |     |     | 865  |     |     |     |     |     | 870  |     |     |     |  |  |
| 875  |     |     |     |     |     | 880  |     |     |     |     |     | 885  |     |     |     |  |  |
| 890  |     |     |     |     |     | 895  |     |     |     |     |     | 900  |     |     |     |  |  |
| 905  |     |     |     |     |     | 910  |     |     |     |     |     | 915  |     |     |     |  |  |
| 920  |     |     |     |     |     | 925  |     |     |     |     |     | 930  |     |     |     |  |  |
| 935  |     |     |     |     |     | 940  |     |     |     |     |     | 945  |     |     |     |  |  |
| 950  |     |     |     |     |     | 955  |     |     |     |     |     | 960  |     |     |     |  |  |
| 965  |     |     |     |     |     | 970  |     |     |     |     |     | 975  |     |     |     |  |  |
| 980  |     |     |     |     |     | 985  |     |     |     |     |     | 990  |     |     |     |  |  |
| 995  |     |     |     |     |     | 1000 |     |     |     |     |     | 1005 |     |     |     |  |  |
| 1010 |     |     |     |     |     | 1015 |     |     |     |     |     | 1020 |     |     |     |  |  |
| 1025 |     |     |     |     |     | 1030 |     |     |     |     |     | 1035 |     |     |     |  |  |
| 1040 |     |     |     |     |     | 1045 |     |     |     |     |     | 1050 |     |     |     |  |  |
| 1055 |     |     |     |     |     | 1060 |     |     |     |     |     | 1065 |     |     |     |  |  |
| 1070 |     |     |     |     |     | 1075 |     |     |     |     |     | 1080 |     |     |     |  |  |
| 1085 |     |     |     |     |     | 1090 |     |     |     |     |     | 1095 |     |     |     |  |  |
| 1100 |     |     |     |     |     | 1105 |     |     |     |     |     | 1110 |     |     |     |  |  |
| 1115 |     |     |     |     |     | 1120 |     |     |     |     |     | 1125 |     |     |     |  |  |
| 1130 |     |     |     |     |     | 1135 |     |     |     |     |     | 1140 |     |     |     |  |  |
| 1145 |     |     |     |     |     | 1150 |     |     |     |     |     | 1155 |     |     |     |  |  |
| 1160 |     |     |     |     |     | 1165 |     |     |     |     |     | 1170 |     |     |     |  |  |
| 1175 |     |     |     |     |     | 1180 |     |     |     |     |     | 1185 |     |     |     |  |  |
| 1190 |     |     |     |     |     | 1195 |     |     |     |     |     | 1200 |     |     |     |  |  |
| 1205 |     |     |     |     |     | 1210 |     |     |     |     |     | 1215 |     |     |     |  |  |
| 1220 |     |     |     |     |     | 1225 |     |     |     |     |     | 1230 |     |     |     |  |  |
| 1235 |     |     |     |     |     | 1240 |     |     |     |     |     | 1245 |     |     |     |  |  |
| 1250 |     |     |     |     |     | 1255 |     |     |     |     |     | 1260 |     |     |     |  |  |
| 1265 |     |     |     |     |     | 1270 |     |     |     |     |     | 1275 |     |     |     |  |  |
| 1280 |     |     |     |     |     | 1285 |     |     |     |     |     | 1290 |     |     |     |  |  |
| 1295 |     |     |     |     |     | 1300 |     |     |     |     |     | 1305 |     |     |     |  |  |
| 1310 |     |     |     |     |     | 1315 |     |     |     |     |     | 1320 |     |     |     |  |  |
| 1325 |     |     |     |     |     | 1330 |     |     |     |     |     | 1335 |     |     |     |  |  |
| 1340 |     |     |     |     |     | 1345 |     |     |     |     |     | 1350 |     |     |     |  |  |
| 1355 |     |     |     |     |     | 1360 |     |     |     |     |     | 1    |     |     |     |  |  |

```

<400> 6001
Arg Cys Pro Ile Ala Ser Glu Val Pro Trp Thr Ile Thr Glu Ala Glu
  1             5             10             15
Leu Arg Val Thr Leu Thr Val Glu Gly Lys Ser Ile Pro Cys Leu Ile
          20             25             30
Asp Thr Gly Ala Thr His Ser Thr Leu Pro Ser Phe Gln Gly Pro Val
          35             40             45
Ser Leu Ala Pro Ile Thr Val Val Gly Ile Asp Gly Gln Ala Ser Lys
          50             55             60
Pro Leu Lys Thr Pro Pro Leu Trp Cys Gln Leu Gly Gln His Ser Phe
  65             70             75             80
Met His Ser Phe Leu Val Ile Pro Thr Cys Pro Leu Pro Leu Leu Gly
          85             90             95
Arg Asn Ile Leu Thr Lys Leu Ser Ala Ser Leu Thr Ile Pro Gly Val
          100            105            110
Gln Leu His Leu Ile Ala Ala Leu Leu Pro Asn Pro Lys Pro Pro Leu
          115            120            125
Cys Pro Leu Thr Ser Pro Gln Tyr His Pro Leu Pro Gln Asp Leu Pro
          130            135            140
Ser Ala
145

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## 5269

&lt;210&gt; 6002

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6002

Ile Pro Tyr Ser Ala Tyr Ile Lys Ser Lys Met Trp Gly Arg Ser Leu  
 1 5 10 15

Leu Leu Pro Gly Gly Asp Gly Ser Pro Leu Thr Leu Leu Gly Glu Gly  
 20 25 30

Gly Ser Cys Trp Pro Val Gly Met Lys Val Leu Ala Pro His Leu Val  
 35 40 45

Phe Pro Asp Thr Thr Ala Val Gly Cys Trp Gly Ala Pro Leu Gln Pro  
 50 55 60

Phe Glu Cys Gly Ile Leu Gly Ser Pro Leu Asp Leu Pro Trp Cys Gly  
 65 70 75 80

Gln Arg Phe Phe Leu Trp Cys Leu Leu Gly Val Glu Gln Leu Ser Ser  
 85 90 95

Lys Ser Phe Leu Ser Cys Trp Asp Val Leu Phe Trp Ser Phe Ser  
 100 105 110

&lt;210&gt; 6003

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (64)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6003

Arg Trp Ala Leu Asp Leu Leu Ile Leu Val Lys Trp Val Trp Asp Leu  
 1 5 10 15

Leu Thr Phe Val Leu Arg Arg Asp Arg Pro Gly Lys Glu Leu Gly Glu  
 20 25 30

Val Ser Ser Lys Glu Arg Gly Val Gly Thr Arg Met Glu Glu Ser Gly  
 35 40 45

Leu Gln Ile Ala Phe Thr Ser Pro Phe Phe Leu Glu Ser Leu Ser Xaa  
 50 55 60

## 5270

Arg  
65

<210> 6004  
<211> 427  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (301)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6004  
Ala Ala Cys Cys Phe Ser Cys Trp Ala Ser Ser Gly Phe Ala Phe Val  
1 5 10 15  
Ala Ser Glu Pro Leu Ala Phe Lys Pro Leu Ser Leu Leu Leu Pro His  
20 25 30  
Thr Pro Leu Ser Leu Thr Pro Leu Phe Cys Cys Pro Val Thr Cys Pro  
35 40 45  
Lys Leu Cys Pro Glu Leu Arg Thr Phe Pro Phe Leu Ser Leu Glu Pro  
50 55 60  
Phe Phe Asp Ser Thr Lys Pro Ser Trp Tyr Pro Gly Met Thr Arg Leu  
65 70 75 80  
Leu Asp Ala Glu Trp Trp Arg Arg Ser Glu Ala Gly His Leu Arg Arg  
85 90 95  
Gln Val Ala Ala Val Leu Phe Phe Pro Glu Gly Thr Cys Ser Asn Lys  
100 105 110  
Lys Ala Leu Leu Lys Phe Lys Pro Gly Ala Phe Ile Ala Gly Val Pro  
115 120 125  
Val Gln Pro Val Leu Ile Arg Tyr Pro Asn Ser Leu Asp Thr Thr Ser  
130 135 140  
Trp Ala Trp Arg Gly Pro Gly Val Leu Lys Val Leu Trp Leu Thr Ala  
145 150 155 160  
Ser Gln Pro Cys Ser Ile Val Asp Val Glu Phe Leu Pro Val Tyr His  
165 170 175  
Pro Ser Pro Glu Glu Ser Arg Asp Pro Thr Leu Tyr Ala Asn Asn Val

## 5271

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 180 |     | 185 |     | 190 |
| Gln Arg Val Met Ala Gln Ala Leu Gly Ile Pro Ala Thr Glu Cys Glu |     |     |     |     |     |
| 195   |     | 200 |     | 205 |     |
| Phe Val Gly Ser Leu Pro Val Ile Val Val Gly Arg Leu Lys Val Ala |     |     |     |     |     |
| 210   |     | 215 |     | 220 |     |
| Leu Glu Pro Gln Leu Trp Glu Leu Gly Lys Val Leu Arg Lys Ala Gly |     |     |     |     |     |
| 225   |     | 230 |     | 235 | 240 |
| Leu Ser Ala Gly Tyr Val Asp Ala Gly Ala Glu Pro Gly Arg Ser Arg |     |     |     |     |     |
|   | 245 |     | 250 |     | 255 |
| Met Ile Ser Gln Glu Glu Phe Ala Arg Gln Leu Gln Leu Ser Asp Pro |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |
| Gln Thr Val Ala Gly Ala Phe Gly Tyr Phe Gln Gln Asp Thr Lys Gly |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |
| Leu Val Asp Phe Arg Asp Val Ala Leu Ala Leu Ala Xaa Leu Asp Gly |     |     |     |     |     |
|   | 290 |     | 295 |     | 300 |
| Gly Arg Ser Leu Glu Glu Leu Thr Arg Leu Ala Phe Glu Leu Phe Ala |     |     |     |     |     |
| 305   |     | 310 |     | 315 | 320 |
| Glu Glu Gln Ala Glu Gly Pro Asn Arg Leu Leu Tyr Lys Asp Gly Phe |     |     |     |     |     |
|   | 325 |     | 330 |     | 335 |
| Ser Thr Ile Leu His Leu Leu Leu Gly Ser Pro His Pro Ala Ala Thr |     |     |     |     |     |
|   | 340 |     | 345 |     | 350 |
| Ala Leu His Ala Glu Leu Cys Gln Ala Gly Ser Ser Gln Gly Leu Ser |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |
| Leu Cys Gln Phe Gln Asn Phe Ser Leu His Asp Pro Leu Tyr Gly Lys |     |     |     |     |     |
|   | 370 |     | 375 |     | 380 |
| Leu Phe Ser Thr Tyr Leu Arg Pro Pro His Thr Ser Arg Gly Thr Ser |     |     |     |     |     |
| 385   |     | 390 |     | 395 | 400 |
| Gln Thr Pro Asn Ala Ser Ser Pro Gly Asn Pro Thr Ala Leu Ala Asn |     |     |     |     |     |
|   | 405 |     | 410 |     | 415 |
| Gly Thr Val Gln Ala Pro Lys Gln Lys Gly Asp                     |     |     |     |     |     |
|   | 420 |     | 425 |     |     |

&lt;210&gt; 6005

&lt;211&gt; 68

## 5272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6005

Ile Tyr Thr Asn Arg Lys Leu Gly Thr Asn Leu Leu Cys Leu Trp Leu  
 1 5 10 15

Leu Tyr Asn Tyr Gln Gly Lys Gly Asn Leu Pro Ile Lys Tyr Lys Val  
 20 25 30

Val Lys Phe Lys Ile Thr Ile Ile Asn Asn Val Leu Leu Leu Gln Asn  
 35 40 45

Glu Met Leu Gly Leu Ile Ile Glu Gly Ser Ser Thr Val Glu Ile Glu  
 50 55 60

Leu Asn Gly Ser  
 65

&lt;210&gt; 6006

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (15)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6006

Gly Pro Glu Phe Pro Gly Arg Pro Thr Arg Pro Val Lys Leu Xaa Phe  
 1 5 10 15

Xaa Tyr Gln Tyr Met His Val Leu Cys Met Ser Ser Thr Cys Val Asp  
 20 25 30

Thr Pro Val Asp Val Lys Leu Leu Tyr Asn Ile Asn Ser Met Cys Phe  
 35 40 45

Tyr Ile Ser Leu Cys Lys Phe Asn Ile Thr Tyr Ala Val Ile Asn His  
 50 55 60

Leu Phe Tyr Cys Cys  
 65

## 5273

<210> 6007  
<211> 97  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (43)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (72)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (74)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (83)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (85)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (90)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6007  
Gln Met Glu Gly Tyr Phe Ser Val Leu Ala Phe Gln Leu Tyr Val Gly  
1 5 10 15  
Lys Leu Pro Val Leu Leu Gln Val Gln Ser Thr Leu Asp Asp Leu Ser  
20 25 30  
Ile Asn Tyr Ser Gly Cys Asn Ser Pro Lys Xaa Ser Ser Tyr Ile Phe  
35 40 45  
Trp Leu Ile Pro Pro His Leu Ser Ile Gln Ser Asp Gly Lys Arg Gly  
50 55 60

## 5274

Arg Trp Ile Leu Met Ser Cys Xaa Leu Xaa Pro Tyr Phe Gln Val Leu  
 65 70 75 80

Trp Trp Xaa Arg Xaa Asn Ile Cys Gln Xaa Ser Gly Phe Leu Ala Arg  
 85 90 95

Cys

<210> 6008

<211> 74

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (71)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (74)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6008

Ile Ile Leu Tyr Gln Gly Gln Arg Asp Phe Cys Arg Thr Ser Pro Leu  
 1 5 10 15

Glu Glu Leu Ser Leu Gly Arg Asn Thr Arg Ile Asn Ile Ser Thr Tyr  
 20 25 30

Ser Ser Pro Lys Asn Phe Pro Pro His Tyr Ser His Leu Pro Ile Asn  
 35 40 45

Asn Leu Leu Trp Val Asn Ile Gln His Ser Val Leu Val Gln Ser Ile  
 50 55 60

Cys Ser Ala Ile Thr Val Xaa Ser Thr Xaa  
 65 70

<210> 6009

<211> 47

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

## 5275

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6009

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Gly | Ile | Val | Cys | Lys | Gly | Ile | Val | Asp | Asn | Lys | Val | Ile | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Arg | Xaa | Lys | Ser | Phe | Leu | Leu | Ser | Leu | Ile | Arg | Pro | Leu | Val |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Trp | Gly | Val | Gly | Arg | Arg | Val | Val | Leu | Thr | Glu | Ser | Phe | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |

&lt;210&gt; 6010

&lt;211&gt; 150

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (70)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (84)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (115)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (146)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6010

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Tyr | Leu | Asn | Val | Leu | Pro | Ser | Pro | Phe | Pro | Ser | Arg | Leu | Cys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Phe | Glu | Gly | Leu | Gly | Val | Cys | Ser | Arg | Pro | Cys | Cys | Leu | Ala | Gln |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Met | Leu | Arg | Lys | Val | Leu | Arg | Thr | His | Phe | Phe | Pro | Ile | Lys | Pro |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Phe | Pro | Asn | His | Lys | Gly | Val | Cys | Asp | Ser | Ser | Pro | Arg | Glu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 5276

|   |     |         |
|---|-----|---------|
| 50  | 55  | 60      |
| Thr Lys Glu Leu Gln Xaa Gly Val Trp Phe Ser Pro Val Gln Thr His |     |         |
| 65  | 70  | 75 80   |
| Pro Glu Leu Xaa Arg Cys Leu Ser Asn Thr Leu Ser Leu Pro Lys Gln |     |         |
|   | 85  | 90 95   |
| Pro Val Gln Thr Phe Ser Leu Gly His Glu Ala Pro Arg Val Leu Pro |     |         |
|   | 100 | 105 110 |
| Val Pro Xaa Ser Asp Ala Tyr Leu Ser Ala Glu Pro Gln Asn Leu Cys |     |         |
|   | 115 | 120 125 |
| Ser Gly Asn Ala Val His Leu Leu Ser Val Gly Ser Glu His Ile Val |     |         |
|   | 130 | 135 140 |
| Leu Xaa Asp Thr Ser Phe   |     |         |
| 145   | 150 |         |

&lt;210&gt; 6011

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (61)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (66)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (77)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

5277

&lt;400&gt; 6011

```

Val Leu Arg Met Gln His Gly Ser Gly Phe Gly Ile Xaa Phe Asn Ala
 1             5             10             15

Thr Asp Ala Leu Arg Cys Val Asn Asn Tyr Gln Gly Met Leu Lys Val
          20             25             30

Ala Cys Ala Glu Glu Trp Gln Glu Ser Arg Thr Glu Gly Glu His Ser
          35             40             45

Lys Glu Val Ile Lys Pro Tyr Asp Trp Thr Tyr Xaa Xaa Asp Tyr Lys
          50             55             60

Gly Xaa Leu Leu Gly Glu Ser Leu Lys Leu Lys Val Xaa Ser Ile
          65             70             75

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&lt;210&gt; 6012

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6012

```

Ile Phe Arg Ser Asp Phe Leu Leu His Phe Tyr Leu Thr Lys Glu Thr
 1             5             10             15

Gly His Thr Pro Trp Phe Arg Asp Val Val Ile Ala Tyr Leu Pro Val
          20             25             30

Phe Lys Lys Cys Phe Leu Gln Leu Leu Ser Thr Thr Val Leu Ser Leu
          35             40             45

Met Asn Thr Val Val Ser His Pro Asn Ser Cys Thr Glu Ile Ile Ser
          50             55             60

His Glu Ser Phe Ser Asn Ile Ser Asn Glu Ser Phe Ser Asn Leu Gly
          65             70             75             80

Ala

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&lt;210&gt; 6013

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 5278

<221> SITE  
 <222> (39)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (94)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (98)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (107)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 6013  
 Gln Leu Pro Val Gln Gly His Gly Leu Phe Gly Ala Gln Glu Val Leu  
 1 5 10 15  
 Asn His Val Leu Arg Asp Ile Glu Leu Phe Met Gly Lys Leu Glu Lys  
 20 25 30  
 Ala Gln Ala Lys Thr Ser Xaa Lys Lys Lys Phe Gly Lys Lys Asn Lys  
 35 40 45  
 Asp Gln Gly Gly Leu Thr Gln Ala Gln Tyr Ile Asp Cys Phe Gln Lys  
 50 55 60  
 Ile Lys His Ser Phe Asn Leu Leu Gly Arg Leu Ala Thr Trp Leu Lys  
 65 70 75 80  
 Glu Thr Ser Ala Pro Glu Leu Val His Ile Leu Phe Lys Xaa Leu Asn  
 85 90 95  
 Phe Xaa Leu Ala Arg Cys Pro Glu Ala Gly Xaa Ala Ala Gln Val Ile  
 100 105 110  
  
 <210> 6014  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

## 5279

<220>  
<221> SITE  
<222> (24)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (54)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (69)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (70)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (78)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (81)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (82)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (83)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (84)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (90)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>

## 5280

&lt;221&gt; SITE

&lt;222&gt; (92)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (93)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (94)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6014

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Glu | Asp | Ile | Ser | Lys | Lys | Met | Asp | Lys | Asp | Glu | Glu | Ala | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Ala | Gln | Ala | Glu | Leu | Xaa | Glu | Ala | Arg | Arg | Gln | Trp | His | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Val | Glu | Ile | Glu | Ser | Leu | His | Ala | Val | Glu | Arg | Gly | Leu | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ser | Leu | His | Ala | Xaa | Glu | Gln | His | Tyr | Gln | Met | Gln | Leu | Gln | Asp |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Thr | Val | Xaa | Xaa | Gly | Leu | Glu | Lys | Glu | Leu | Gln | Xaa | Val | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Xaa | Xaa | Xaa | Xaa | Lys | Ala | Ala | Phe | Lys | Xaa | Thr | Xaa | Xaa | Xaa | Phe |  |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |  |

&lt;210&gt; 6015

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6015

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Ala | His | Thr | Val | Arg | His | Glu | Glu | Lys | Val | Pro | Cys | His | Val |
| 1   |     |     |     | 5   |     |     |     |     |     | 10  |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| Cys | Gly | Lys | Met | Leu | Ser | Pro | Ala | Asp | Pro | Phe | Asn | Phe |  |  |  |
|     |     |     |     | 20  |     |     |     | 25  |     |     |     |     |  |  |  |

&lt;210&gt; 6016

&lt;211&gt; 53

## 5281

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6016

Gln Gly Pro Thr Glu Val Lys Glu Gly Gly Trp Glu Cys Tyr Ser Leu  
1 5 10 15

Glu Trp Arg Cys Asp Phe Ser Arg Trp Lys Val Val Phe Leu Lys Gly  
20 25 30

Ile Gly Arg Ser Arg Phe Leu Leu Ile Gln Ile His Phe Pro Pro Thr  
35 40 45

Glu Gly Arg Asn Tyr  
50

&lt;210&gt; 6017

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6017

Pro Arg Val Val Phe His Leu Asn Leu His Pro Pro Pro Pro Gly Asp  
1 5 10 15

Tyr Phe Glu Ile Asn Leu Arg His Gln Gly Gln Ala Gln  
20 25

&lt;210&gt; 6018

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (33)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (71)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (72)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5282

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (73)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6018

Ser Phe His Asn Thr Leu Ala Phe Pro Tyr Leu Tyr Gly Leu Tyr Leu  
 1 5 10 15

Val Asn Leu Asn Lys Asn Leu Asp Phe Lys Lys Asn Trp Glu Arg Arg  
 20 25 30

Xaa Val Ile Leu Leu Ala Phe Ser Ser Leu Asp Val Gly Ser His Asn  
 35 40 45

Ser Asn Ile Glu Gly Lys Phe Cys Phe Cys Lys Ile Gly Leu Lys Leu  
 50 55 60

Arg Ser Phe His Glu Arg Xaa Xaa Xaa Thr Cys Thr Ser Ala  
 65 70 75

&lt;210&gt; 6019

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6019

Ser Ala Thr Cys Leu Phe Glu Val Leu Tyr Gln Ser Val Thr Arg Ala  
 1 5 10 15

Phe Cys Val Cys Ala Ile Leu Cys Leu Ser Phe Lys Val Ala Pro Lys  
 20 25 30

Val Ser His Leu Ala Phe Gln Gln Gly His Phe Leu Ser Phe Tyr Asn  
 35 40 45

Met Gln Tyr Ile Cys Asn Asp Leu Ala Phe Phe  
 50 55

&lt;210&gt; 6020

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6020

Arg Ser His Ile Leu Leu Leu Ser Gly Cys Phe Ser Ile Leu Cys Pro

## 5283

1                      5                      10                      15  
 Phe Pro Gln Gln Gln Val Gly Pro Arg Leu Cys Thr Ala Leu Arg Cys  
                          20                      25                      30  
 Arg Trp Tyr Arg Asp Asn Cys Leu Asn Ser Cys Ala Asp Phe Cys Asn  
                          35                      40                      45  
 Ser Ala Val Glu Thr Lys Val Leu Glu Ser Val Leu Ser Met  
                          50                      55                      60

&lt;210&gt; 6021

&lt;211&gt; 216

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (39)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6021

Ser Gly Gly Ser Ser Val His Leu Ser Asp Pro Val Ala Pro Ser Ser  
 1                      5                      10                      15  
 Ala Gly Leu Tyr Phe Glu Pro Glu Pro Ile Ser Ser Thr Pro Asn Tyr  
                          20                      25                      30  
 Leu Gln Arg Gly Glu Phe Xaa Ser Cys Val Ser Cys Glu Glu Asn Ser  
                          35                      40                      45  
 Ser Cys Leu Asp Gln Ile Phe Asp Ser Tyr Leu Gln Thr Glu Met His  
                          50                      55                      60  
 Pro Glu Pro Leu Leu Asn Ser Thr Gln Ser Ala Pro His His Phe Pro  
 65                      70                      75                      80  
 Asp Ser Phe Gln Ala Thr Pro Phe Cys Phe Asn Gln Ser Leu Ile Pro  
                          85                      90                      95  
 Gly Ser Pro Ser Asn Ser Ser Ile Leu Ser Gly Ser Leu Asp Tyr Ser  
                          100                      105                      110  
 Tyr Ser Pro Val Gln Leu Pro Ser Tyr Ala Pro Glu Asn Tyr Asn Ser  
                          115                      120                      125  
 Pro Ala Ser Leu Asp Thr Arg Thr Cys Gly Tyr Pro Pro Glu Asp His  
                          130                      135                      140



## 5284

Ser Tyr Gln His Leu Ser Ser His Ala Gln Tyr Ser Cys Phe Ser Ser  
 145 150 155 160

Ala Thr Thr Ser Ile Cys Tyr Cys Ala Ser Cys Glu Ala Glu Asp Leu  
 165 170 175

Asp Ala Leu Gln Ala Ala Glu Tyr Phe Tyr Pro Ser Thr Asp Cys Val  
 180 185 190

Asp Phe Ala Pro Ser Ala Ala Ala Thr Ser Asp Phe Tyr Lys Arg Glu  
 195 200 205

Thr Asn Cys Asp Ile Cys Tyr Ser  
 210 215

<210> 6022

<211> 43

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (29)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6022

Ser Lys Arg Arg Asp Lys Lys Arg Gly Gly Val Gly Ser Arg Lys Gln  
 1 5 10 15

Ser Leu Asn Phe Ser Arg Thr Gln Leu Ser Leu Arg Xaa Asn Phe Leu  
 20 25 30

Leu Ser Leu Trp Asp Ala Ile Val Ile Phe Asn  
 35 40

<210> 6023

<211> 55

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

## 5285

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6023

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Cys | Xaa | Leu | Arg | Cys | Val | Xaa | Glu | Thr | Gly | Ser | Asn | Thr | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Tyr | Arg | Glu | Ser | Trp | Tyr | Ala | Cys | Arg | Tyr | Arg | Ser | Gly | Ile | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Thr | His | Ala | Ser | Glu | Ile | Ser | Trp | Pro | Tyr | Phe | Leu | Ser | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Leu | Thr | Met | Met | Trp |
|     | 50  |     |     |     |     | 55  |

&lt;210&gt; 6024

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (43)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (58)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6024

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ala | Ile | Lys | Val | Lys | Glu | Tyr | Asn | Asn | Leu | Leu | Asn | Ala | Leu | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 5286

Met Asp Ser Asp Glu Met Lys Lys Ile Leu Ala Glu Asn Ser Arg Lys  
                   20                  25                  30

Ile Xaa Val Leu Gln Val Asn Glu Lys Ser Xaa Ile Arg Gln Tyr Xaa  
           35                  40                  45

Xaa Leu Val Glu Leu Glu Arg Gln Leu Xaa Lys Glu Asn Glu Lys Gln  
       50                  55                  60

Lys Asn Glu Leu Leu Ser Met Glu Ala Glu Val Cys Glu Lys Ile Gly  
   65                  70                  75                  80

Cys Leu Gln

<210> 6025

<211> 64

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (3)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (49)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6025

His Val Xaa Asp Val Ile Leu Glu Val Asn Gly Tyr Pro Val Gly Gly  
   1                  5                  10                  15

Gln Asn Asp Leu Glu Arg Leu Gln Gln Leu Pro Glu Ala Glu Pro Pro  
           20                  25                  30

Leu Cys Leu Lys Leu Ala Ala Arg Ser Leu Arg Gly Leu Glu Ala Trp  
       35                  40                  45

Xaa Pro Pro Gly Ala Ala Glu Asp Trp Ala Leu Ala Ser Asp Leu Leu  
       50                  55                  60

## 5287

&lt;210&gt; 6026

&lt;211&gt; 109

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (11)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (91)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (96)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (98)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6026

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Ser | Ser | Leu | Ala | Gly | Trp | Leu | His | Xaa | Pro | Trp | Ala | Pro | Gln |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ile | Lys | Ser | Thr | Phe | Ser | Val | Ser | Gly | Ile | Cys | Met | Thr | Ser | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Pro | Cys | Trp | Val | Val | Ile | Leu | Val | Ser | Asp | Gly | Thr | His | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Lys | Tyr | Phe | Cys | Gln | Gly | Ser | Gly | Gly | Phe | Met | Ala | Cys | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Ala | Leu | Leu | Gly | Arg | Leu | Gln | Arg | Cys | His | Leu | Ala | Leu | Ser |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Lys | Asn | Phe | Glu | Thr | Gln | Pro | Gly | Ala | Xaa | Arg | Gly | Leu | Lys | Xaa |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Xaa | Phe | Pro | Phe | Lys | Asn | Tyr | Gln | Lys | Ile | Arg | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |

&lt;210&gt; 6027

&lt;211&gt; 146

5288

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (100)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (110)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (144)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6027

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asp | Glu | Asn | Thr | Met | Lys | Asn | Ile | Phe | Ser | Lys | Lys | Arg | Lys | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Ala | Cys | Ser | Asp | Cys | Glu | Val | Glu | Val | Leu | Pro | Leu | Gly | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | His | Pro | Arg | Thr | Ala | Lys | Thr | Glu | Lys | Cys | Pro | Pro | Lys | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asn | Asn | Pro | Lys | Glu | Leu | Thr | Met | Glu | Thr | Lys | Tyr | Asp | Asn | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Arg | Ile | Gln | Tyr | His | Ser | Val | Ile | Arg | Asp | Pro | Glu | Ser | Lys | Thr |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ile | Phe | Gln | His | Asn | Gly | Lys | Lys | Met | Glu | Phe | Val | Ser | Ser | Glu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Thr | Xaa | Glu | Asp | Asn | Asp | Gly | Phe | Lys | Pro | Pro | Xaa | Glu | His |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Ser | Lys | Thr | Lys | Gly | Ala | Gln | Lys | Asp | Ser | Ser | Ser | Asn | His |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asp | Glu | Phe | Glu | Asp | Asn | Leu | Leu | Ile | Gly | Ile | Gln | Met | Trp | Xaa |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |
|-----|-----|
| Arg | Tyr |
| 145 |     |

5289

&lt;210&gt; 6028

&lt;211&gt; 222

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (37)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (221)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6028

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Pro | Ala | Ser | Thr | Cys | Pro | Arg | Arg | Pro | Thr | Gly | Ala | Ala | Cys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Val | Asn | Trp | Arg | Ser | Pro | Lys | Gly | Pro | Gly | Arg | Pro | Pro | Gly | Ser |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Pro | Thr | Xaa | Ala | Gln | Arg | His | Pro | Leu | Cys | Ser | Arg | Asn | Gln |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Thr | Leu | Pro | Arg | Thr | Arg | Pro | Gln | Ser | Pro | Ala | Ala | Pro | Ser |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Thr | Cys | Gln | Pro | Ala | Gly | Ser | Ser | Ala | Leu | Trp | Ser | Pro | Ser |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Cys | Leu | Pro | Ala | Pro | Ala | Trp | Val | Pro | Val | Pro | Pro | Ser | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Trp | Thr | Met | Arg | Ala | Val | Ile | Lys | Pro | Arg | Leu | Lys | Met | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Met | Ser | Ser | Arg | Met | Lys | Thr | Arg | Met | Arg | Thr | Arg | Met | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Ser | Arg | Ala | Ser | Gln | Ser | Leu | Glu | Arg | Arg | Pro | Arg | Ser | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Trp | Thr | Trp | Ala | Thr | Val | Thr | His | His | Glu | Val | Pro | Thr | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ser | Ile | Pro | Cys | Ser | Val | Arg | Val | Ala | Ala | His | His | Thr | Ser | Pro |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Gln | Glu | Gln | Glu | Ser | Pro | Gln | Ala | Glu | Cys | Pro | Arg | Gly | Ala | Leu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

## 5290

Leu Arg Leu Ser Arg Glu Pro Val Lys Glu Ile Glu Ile Lys Pro Val  
 195 200 205

Leu Leu Gly His Arg Phe Ala Val Leu Lys Lys Lys Xaa Asn  
 210 215 220

<210> 6029  
 <211> 49  
 <212> PRT  
 <213> Homo sapiens

<400> 6029  
 Phe Val Glu Val Gly Met Ile Trp Gln Ser Leu Lys Phe Ile Leu Gly  
 1 5 10 15

Arg Arg Trp Gln Lys Ser Gly Val Tyr Gln Val Met Arg Phe Leu Leu  
 20 25 30

Thr His Gln Pro Asn Phe Cys Ser Phe Cys Thr Ser Glu Met Lys Lys  
 35 40 45

Arg

<210> 6030  
 <211> 73  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (45)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6030  
 Asp Thr Glu Ala Asp Val Leu Gly Leu Val Ala Ser Gly Thr Pro Asp  
 1 5 10 15

Val Ala Arg Ala Met Thr His Thr Leu Arg His Leu Ala Ala Arg  
 20 25 30

Pro Pro Thr Gln Ala Gln His Gln His Gln Cys Pro Xaa Cys Leu Leu  
 35 40 45

Pro Leu Pro Gly Val Leu Thr Gly Trp Gly Trp Val Trp Gln Lys Ala  
 50 55 60

## 5291

Glu Leu Ser Glu Ala Trp Gly Gln Glu  
65 70

<210> 6031  
<211> 55  
<212> PRT  
<213> Homo sapiens

<400> 6031  
Asn Asn Phe Tyr Ile Leu Tyr Phe Pro Thr Lys Gln Asn Arg Asp Gln  
1 5 10 15  
Tyr Ser His Leu Leu Ser Asp His Phe Leu Pro Tyr Gln Gly His Asn  
20 25 30  
Ser Phe Arg Glu Lys Tyr Phe Ser Gly Val Thr Lys Arg Ile Ala Lys  
35 40 45  
Glu Glu Lys Ser Thr Gln Glu  
50 55

<210> 6032  
<211> 147  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (7)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (21)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (24)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (40)  
<223> Xaa equals any of the naturally occurring L-amino acids



## 5292

&lt;400&gt; 6032

Val Phe Arg Glu His Arg Xaa Ser Val Ile Cys Leu Glu Leu Val Asn  
 1 5 10 15

Arg Leu Val Tyr Xaa Gly Ser Xaa Asp Arg Thr Val Lys Cys Trp Leu  
 20 25 30

Ala Asp Thr Gly Glu Cys Val Xaa Thr Phe Thr Ala His Arg Arg Asn  
 35 40 45

Val Ser Ala Leu Lys Tyr His Ala Gly Thr Leu Phe Thr Gly Ser Gly  
 50 55 60

Asp Ala Cys Ala Arg Ala Phe Asp Ala Gln Ser Gly Glu Leu Arg Arg  
 65 70 75 80

Val Phe Arg Gly His Thr Phe Ile Ile Asn Cys Ile Gln Val His Gly  
 85 90 95

Gln Val Leu Tyr Thr Ala Ser His Asp Gly Ala Leu Arg Leu Trp Asp  
 100 105 110

Val Arg Gly Leu Arg Gly Ala Pro Arg Ser Pro Pro Pro Met Arg Ser  
 115 120 125

Leu Ser Arg Leu Phe Ser Asn Lys Val Gly Cys Ala Val Ala Pro Leu  
 130 135 140

Gln Pro Ala  
 145

&lt;210&gt; 6033

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (34)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6033

Gly Asn Arg Ala Arg Leu His Leu Lys Lys Arg Lys Lys Asn Cys Asn  
 1 5 10 15

Ser Tyr Thr Leu Ala Leu Leu Leu Tyr His Cys Val Ile Leu Lys Thr  
 20 25 30

Thr Xaa Ile Tyr Tyr Thr Gly Thr Cys Leu Leu Ser Ile Ser Thr Thr

## 5293

35 40 45  
 Lys Met Glu Ala Pro Thr Ala Ile Arg Leu Ile Ser Leu Pro Gly Pro  
 50 55 60  
 Ile Leu Ile Met Leu Leu  
 65 70  
  
 <210> 6034  
 <211> 162  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (135)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 6034  
 Glu His Leu Glu Arg Met Leu Gly Gln Ala Gly Glu Arg Arg Ala Asp  
 1 5 10 15  
 Val Tyr Val Gly Val Asp Val Phe Ala Arg Gly Asn Val Val Gly Gly  
 20 25 30  
 Arg Phe Asp Thr Asp Lys Ser Leu Glu Leu Ile Arg Lys His Gly Phe  
 35 40 45  
 Ser Val Ala Leu Phe Ala Pro Gly Trp Val Tyr Glu Cys Leu Glu Lys  
 50 55 60  
 Lys Asp Phe Phe Gln Asn Gln Asp Lys Phe Trp Gly Arg Leu Glu Arg  
 65 70 75 80  
 Tyr Leu Pro Thr His Ser Ile Cys Ser Leu Pro Phe Val Thr Ser Phe  
 85 90 95  
 Cys Leu Gly Met Gly Ala Arg Arg Val Cys Tyr Gly Gln Glu Glu Ala  
 100 105 110  
 Val Gly Pro Trp Tyr His Leu Ser Ala Gln Glu Ile Gln Pro Leu Phe  
 115 120 125  
 Gly Glu His Arg Leu Gly Xaa Asp Gly Arg Gly Trp Val Arg Thr His  
 130 135 140  
 Cys Cys Leu Glu Asp Ala Trp His Gly Gly Ser Ser Leu Leu Val Arg  
 145 150 155 160

## 5294

Gly Val

&lt;210&gt; 6035

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (15)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (24)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (27)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (53)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6035

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Tyr | Tyr | Thr | Cys | Glu | Thr | Asp | Xaa | Glu | Asn | Gln | Cys | Gly | Xaa | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Val | His | Ile | Asn | Tyr | Leu | Xaa | Ser | Thr | Xaa | His | Lys | Ser | Gln | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Lys | Ile | Ser | Gly | Leu | Ala | Pro | Glu | Arg | Gln | Ile | Pro | His | Asp | Leu |
|     |     |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Asp | Met | Xaa | Xaa | Leu | Lys | Lys | Ser | Asn | Ser | Glu | Gln | Arg | Val | Glu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5295

50

55

60

&lt;210&gt; 6036

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (43)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (75)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6036

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Leu | His | Phe | Cys | Gly | Lys | Ser | Pro | Phe | Trp | Arg | Ser | Ser | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Arg | Phe | Leu | Gly | Cys | Tyr | Asn | Gln | Asp | Phe | Ser | Thr | Thr | Thr | Leu |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Phe | Gly | Ala | Arg | Val | Ile | Leu | Cys | Xaa | Trp | Gly | Gly | Gln | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Val | Gly | Cys | Phe | Thr | Ala | Ser | Ile | Pro | Leu | Ser | Tyr | Ser | Leu | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Lys | Thr | Thr | Lys | Asn | Val | Pro | Arg | His | Xaa | Gln | Ile | Ser | Pro | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Gly | Gln | Ser | Phe | Ile |
|     |     |     |     | 85  |

&lt;210&gt; 6037

&lt;211&gt; 214

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6037

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Leu | Arg | Asn | Ala | Lys | Tyr | Ser | Phe | Pro | Gln | Glu | Leu | Ile | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

## 5296

Leu Phe Ser Met Thr Asp Leu Asn Asp Asn Ile Cys Lys Arg Tyr Ile  
                   20                  25                  30  
 Lys Met Ile Thr Asn Ile Val Ile Leu Ser Leu Ile Ile Cys Ile Ser  
           35                  40                  45  
 Leu Ala Phe Trp Ile Ile Ser Met Thr Ala Ser Thr Tyr Tyr Gly Asn  
       50                  55                  60  
 Leu Arg Pro Ile Ser Pro Trp Arg Trp Leu Phe Ser Val Val Val Pro  
   65                  70                  75                  80  
 Val Leu Ile Val Ser Asn Gly Leu Lys Lys Lys Ser Leu Asp His Ser  
                   85                  90                  95  
 Gly Ala Leu Gly Gly Leu Val Val Gly Phe Ile Leu Thr Ile Ala Asn  
           100                  105                  110  
 Phe Ser Phe Phe Thr Ser Leu Leu Met Phe Phe Leu Ser Ser Ser Lys  
       115                  120                  125  
 Leu Thr Lys Trp Lys Gly Glu Val Lys Lys Arg Leu Asp Ser Glu Tyr  
   130                  135                  140  
 Lys Glu Gly Gly Gln Arg Asn Trp Val Gln Val Phe Cys Asn Gly Ala  
  145                  150                  155                  160  
 Val Pro Thr Glu Leu Ala Leu Leu Tyr Met Ile Glu Asn Gly Pro Gly  
                   165                  170                  175  
 Glu Ile Gln Ser Ile Phe Pro Ser Ser Thr Pro Leu Pro Gly Cys Val  
           180                  185                  190  
 Cys Leu Ser Trp Leu His Trp Pro Ala Leu Leu Glu Thr His Gly Leu  
       195                  200                  205  
 Gln Lys Leu Ala Gln Phe  
   210

&lt;210&gt; 6038

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6038

Phe Phe Tyr Asn Thr Lys Val Thr Thr Trp Asn Phe Lys Asp Asn Val  
   1                  5                  10                  15

**5297**

Met Cys Val Cys Glu Ile Tyr Ile His Ile Tyr Ile Tyr Phe Leu Lys  
                   20                  25                  30

Glu Glu Lys Ile Pro Phe Cys Ser Thr Cys Ile Asn Ser Ser Phe Leu  
           35                  40                  45

Ile Ala Val Lys Trp Gln Leu Leu Ile Asn Tyr Cys Asp Cys Phe Lys  
       50                  55                  60

Ile  
   65

<210> 6039  
 <211> 55  
 <212> PRT  
 <213> Homo sapiens

<400> 6039  
 Lys Ala Gly Phe Arg Gln Ser Val His Phe Tyr Ser Lys Ile Gly Val  
   1                  5                  10                  15

Ser Val Tyr Ile Tyr Leu Lys Leu Asn Arg Ser Asp Phe Tyr Phe Leu  
           20                  25                  30

Gly Tyr Ser Arg Ser Ile Leu Lys Leu Leu Phe Lys Ile Leu Lys Pro  
           35                  40                  45

His Phe Lys Ser Cys Arg Pro  
       50                  55

<210> 6040  
 <211> 54  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (34)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (35)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6040  
 Gln Leu Gln Ile Asn Arg Tyr Thr Pro Tyr Thr Ile Thr Asn Thr Phe

## 5298

1                      5                      10                      15  
 Tyr Thr Val His Ile Ser Val His Gln His Tyr Phe Ile Tyr Thr Leu  
                          20                      25                      30  
 Phe Xaa Xaa Ile Asn Ile Phe Leu Asn Trp Asp Tyr Cys Pro Tyr Ala  
                          35                      40                      45  
 Leu Tyr Phe Leu Phe Gln  
                          50

&lt;210&gt; 6041

&lt;211&gt; 77

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6041

Leu Leu Thr Thr Trp Val Lys Gly Lys Arg Gln Met Ala Ser Lys Pro  
 1                      5                      10                      15  
 Leu Val Cys Leu Ser Ser Ser Gly Ser Glu Glu Ile Thr Ser Ala Phe  
                          20                      25                      30  
 Leu Pro Glu Glu Phe Gly Val Phe Lys Gly Gly Trp Gly Gly Cys His  
                          35                      40                      45  
 Phe Glu Asn Met Leu Leu Phe Leu Leu Ile Val Leu Arg Leu Ile Trp  
                          50                      55                      60  
 Lys Gly Tyr Phe Phe Leu Ala Asn Thr Phe Trp Tyr Phe  
 65                      70                      75

&lt;210&gt; 6042

&lt;211&gt; 218

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (133)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (202)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5299

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (208)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (216)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6042

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ile | Glu | Met | Ala | Leu | Pro | Lys | Asp | Ala | Ile | Pro | Ser | Leu | Ser | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Gln | Cys | Gly | Ile | Cys | Met | Glu | Ile | Leu | Val | Glu | Pro | Val | Thr | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Cys | Asn | His | Thr | Leu | Cys | Lys | Pro | Cys | Phe | Gln | Ser | Thr | Val | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Ser | Leu | Cys | Cys | Pro | Phe | Cys | Arg | Arg | Arg | Val | Ser | Ser | Trp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Tyr | His | Thr | Arg | Arg | Asn | Ser | Leu | Val | Asn | Val | Glu | Leu | Trp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ile | Ile | Gln | Lys | His | Tyr | Pro | Arg | Glu | Cys | Lys | Leu | Arg | Ala | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gln | Glu | Ser | Glu | Glu | Val | Ala | Asp | Asp | Tyr | Gln | Pro | Val | Arg | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Lys | Pro | Gly | Glu | Leu | Arg | Arg | Glu | Tyr | Glu | Glu | Glu | Ile | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Val | Ala | Ala | Xaa | Arg | Arg | Ala | Ser | Glu | Glu | Glu | Glu | Asn | Lys | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Glu | Glu | Tyr | Ile | Gln | Arg | Leu | Leu | Ala | Glu | Glu | Glu | Glu | Glu | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Arg | Gln | Ala | Glu | Lys | Arg | Arg | Arg | Ala | Met | Glu | Glu | Gln | Leu | Lys |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asp | Glu | Glu | Leu | Ala | Arg | Lys | Leu | Ser | Ile | Asp | Ile | Asn | Asn | Phe |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Glu | Gly | Ser | Ile | Ser | Ala | Ser | Pro | Xaa | Glu | Phe | Gln | Lys | Asn | Xaa |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Val | Thr | Pro | Lys | Ser | Xaa | Lys | Arg |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 5300

210

215

&lt;210&gt; 6043

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6043

Trp Pro Gly Xaa Trp Thr Leu Ala Thr Glu Leu Leu His Arg Ala Trp  
 1 5 10 15

Cys Pro Gln Ala Ser Arg Leu Gly Leu Glu Pro Gly Met Ser Pro Gly  
 20 25 30

Ser Ala Leu Ala Leu Leu Trp Ser Leu Pro Ala Ser Asp Leu Gly Arg  
 35 40 45

Ser Val Ile Ala Gly Leu Trp Pro His Thr Gly Val Leu Ile His Leu  
 50 55 60

Glu Thr Ser Gln Ser Phe Leu Gln Gly Gln Leu Thr Lys Ser Ile Phe  
 65 70 75 80

Pro Leu Cys Cys Thr Ser Leu Phe Cys Val Cys Val Val Thr Val Gly  
 85 90 95

Gly Gly Arg Val Gly Ser Thr Phe Val Ala  
 100 105

&lt;210&gt; 6044

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6044

Ile Pro Ala Pro Leu Tyr His Leu Phe Leu Pro Leu Lys Gly Lys Thr  
 1 5 10 15

Phe His Pro Ser Lys Leu Thr Ala Phe Ser Val Gly Phe Ser Tyr Ala  
 20 25 30

Leu His Thr Leu Asp Leu Thr Cys Arg Tyr Ser Ser Pro Leu Ala Arg

## 5301

35                                      40                                      45  
 Ser Ile Cys Met Trp Tyr Phe Ser Phe Pro Ser Val Asp Ile Ser Tyr  
     50                                      55                                      60  
  
 Met Ile Phe  
     65  
  
  
 <210> 6045  
 <211> 78  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (59)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (60)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (70)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <220>  
 <221> SITE  
 <222> (73)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 6045  
 His Val Val Tyr Pro Arg Lys Leu Gly Arg Pro Leu Pro Ser Gln Ala  
     1                                      5                                      10                                      15  
  
 Leu Arg Asn Asn Phe Ser Cys Leu Pro Met Leu Ile Ile Leu Val Phe  
             20                                      25                                      30  
  
 Asn Ser Leu Ser Asp Leu Gln Asn Val Phe Ile Asn Ser Ser Cys Thr  
             35                                      40                                      45  
  
 Trp Leu Asp Lys Leu Ser Cys Leu Cys Trp Xaa Xaa Asn Asp Tyr Leu  
     50                                      55                                      60  
  
 Leu Ile Tyr Phe Gly Xaa Asn Ile Xaa Lys Asn Ile Asn Lys  
     65                                      70                                      75

## 5302

&lt;210&gt; 6046

&lt;211&gt; 162

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (102)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6046

Pro Tyr Arg Glu Ser Trp Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro  
 1 5 10 15

Gly Ser Thr His Ala Ser Gly Arg Leu Ala Gly Arg Gly Ala Glu Ser  
 20 25 30

Gly Leu Pro Arg Arg Gly Thr Ser Tyr Ser Val Gly Glu Ala Met Glu  
 35 40 45

Glu Leu Leu Pro Asp Gly Gln Ile Trp Ala Asn Met Asp Pro Glu Glu  
 50 55 60

Arg Met Leu Ala Ala Ala Thr Ala Phe Thr His Ile Cys Ala Gly Gln  
 65 70 75 80

Gly Glu Gly Asp Val Arg Arg Glu Ala Gln Ser Ile Gln Tyr Asp Pro  
 85 90 95

Tyr Ser Lys Ala Ser Xaa Ala Pro Gly Lys Arg Pro Ala Leu Pro Val  
 100 105 110

Gln Leu Gln Tyr Pro His Val Glu Ser Asn Val Pro Ser Glu Thr Val  
 115 120 125

Ser Glu Ala Ser Gln Arg Leu Arg Lys Pro Val Met Lys Arg Lys Val  
 130 135 140

Leu Arg Arg Lys Pro Asp Gly Glu Val Leu Val Thr Asp Glu Ser Ile  
 145 150 155 160

Ile Lys

&lt;210&gt; 6047

&lt;211&gt; 48

&lt;212&gt; PRT

## 5303

<213> Homo sapiens

<400> 6047

Val Leu Cys Val Cys Val Cys Val Cys Val Cys Ala His Met Cys Thr  
1 5 10 15  
Leu Val Leu Val Pro Asn Ser Cys Ser Pro Gly Asp Pro Leu Val Leu  
20 25 30  
Glu Arg Pro Pro Pro Arg Trp Ser Thr Ser Phe Val Pro Leu Val Arg  
35 40 45

<210> 6048

<211> 74

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6048

Asn Val Lys Lys His Ile Tyr Leu Tyr Ile Asp Phe Lys Gln Asn Thr  
1 5 10 15  
Leu Asn Thr Leu Leu Ser Val Arg Leu Met Xaa Ala Glu Glu Phe Tyr  
20 25 30  
Trp Val Glu Lys Thr Val Ile Tyr Ile Val Leu Asn Val Phe Ile Ile  
35 40 45  
Asn Gly Cys Ser Ile Ile Ser Ile Leu Phe Ser Ala Ser Asn Gly Met  
50 55 60  
Ile Ile Arg His Phe Ser Leu Leu Ile Ser  
65 70

<210> 6049

<211> 45

<212> PRT

<213> Homo sapiens

<400> 6049

## 5304

Phe Ile Lys Trp Val Ile Ile His Thr Asn Ala Lys Leu Ser Ile Tyr  
 1 5 10 15

Tyr Ile Lys Ile Phe Asn Val Leu Ala Asn Phe Gly Lys Ala Lys Thr  
 20 25 30

Thr Ser Val Asn Lys Asp Gly Phe Leu Val Ile Cys His  
 35 40 45

<210> 6050

<211> 62

<212> PRT

<213> Homo sapiens

<400> 6050

Gly Glu Thr Ser Gly Leu Leu Cys Ser Gly Lys Thr Arg Asp Ala His  
 1 5 10 15

Tyr Cys Glu Gly Pro Leu Lys Ser Gly Leu Leu Asn Gly Phe Leu Leu  
 20 25 30

Ile Ser Trp Val His Ala Arg Met Met Gly Leu Asp Ala Val Gly Lys  
 35 40 45

Arg Arg Cys Lys Asn Asn Lys Gln Tyr Ile Pro Ser Lys Lys  
 50 55 60

<210> 6051

<211> 59

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (22)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6051

Gln Xaa Cys Lys Asn Ile Gln Lys Ser Arg Thr Ile Gly Leu Ser Phe  
 1 5 10 15

Gln Ser Lys Ser Lys Xaa Ser Cys Phe His Phe Thr Arg Leu Trp Lys

## 5305

20 25 30  
 Pro Met Asp Val Ile Val Lys Cys Ile Cys Ile Thr Leu Thr Phe Leu  
 35 40 45  
 Lys Cys Phe Glu Leu Ile Lys Asn Ser Thr Met  
 50 55

<210> 6052  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<400> 6052  
 Asp Thr Phe Asn Pro Val Asn Phe Phe Ser Val Ser Asp Lys Val Lys  
 1 5 10 15  
 Phe Ser Ser Arg Val Gln Asn Thr Phe Ile Tyr Phe Phe Val Phe Leu  
 20 25 30  
 Lys Val Gln Arg Thr Thr Leu Ile Asn Leu Ser Phe Pro Ala Thr Trp  
 35 40 45  
 Asn Ser Thr  
 50

<210> 6053  
 <211> 89  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (14)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6053  
 Lys Leu Leu Ser Pro Leu Asn Gly Leu Gly Pro Leu Val Xaa Ser His  
 1 5 10 15  
 Cys Ser Ile Arg Val Ser Leu His Leu Trp Ala Leu Leu Ser Cys Asp  
 20 25 30  
 Ser Arg Asn Val Leu Leu Ile His Phe Met Val Asp His Pro Leu Ala  
 35 40 45  
 Leu Ser Thr Leu Pro Leu Phe Ser Ser Ala Pro His Arg Ile Ile Ser

## 5306

50                                      55                                      60  
 Ile Val Ser Val Ser Ser Leu Leu Ile Leu Tyr Ser Ala Cys Ser Asp  
 65                                      70                                      75                                      80  
 Leu Pro Val Asn Pro Leu Val Asn Leu  
                                     85

&lt;210&gt; 6054

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6054

Ile Ser Gly Asp Lys His Leu Lys Lys Val Gln Leu Thr Leu Glu Gln  
 1                                      5                                      10                                      15  
 His Glu Ser Glu Leu Cys Val Gly Leu Leu Thr Gly Arg Phe Phe Phe  
                                     20                                      25                                      30  
 Ser Ile Ser Ile Leu Glu Asn Phe Leu Glu Ile Phe Gly Asn Leu Lys  
                                     35                                      40                                      45  
 Lys Leu Ala Asn Tyr Ser Leu Glu Ile Ser Glu Val Lys Lys Lys Leu  
                                     50                                      55                                      60  
 Val Cys His Arg Cys Ile Lys Leu Thr Met Ser Ile Leu Val His Phe  
 65                                      70                                      75                                      80  
 Ile Ile Tyr Tyr His Lys Ile Tyr Thr Ser Phe Phe  
                                     85                                      90

&lt;210&gt; 6055

&lt;211&gt; 48

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5307

<220>  
 <221> SITE  
 <222> (19)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (27)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (28)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (29)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6055  
 Thr Glu Lys Glu Met Lys Ile Asp Gln Xaa Glu Lys Gly Leu Val Xaa  
     1                    5                    10                    15  
 Lys Gly Xaa Lys Gly Arg Ser Leu Trp Asn Xaa Xaa Xaa Leu Lys Asn  
                     20                    25                    30  
 Glu Val Thr Pro Asn Asn Arg Thr Gly Gln Ser Glu Met Thr Trp Leu  
             35                    40                    45

<210> 6056  
 <211> 55  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (5)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6056  
 Lys Ser Ser Ile Xaa Pro Pro Leu Ile Phe Pro Ala Thr Asp Ile Asp  
     1                    5                    10                    15  
 Arg Ile Leu Arg Ala Gly Phe Thr Leu Gln Glu Ala Leu Gly Ala Leu  
             20                    25                    30



## 5308

His Arg Val Gly Gly Asn Ala Asp Leu Ala Leu Leu Val Leu Leu Ala  
35 40 45

Lys Asn Ile Val Val Pro Thr  
50 55

<210> 6057

<211> 56

<212> PRT

<213> Homo sapiens

<400> 6057

Ser Gln Leu Leu Gly Arg Leu Arg Gln Glu Asn His Leu Asn Pro Gly  
1 5 10 15

Gly Arg Gly Cys Ser Glu Pro Arg Ser His His Cys Thr Pro Ala Trp  
20 25 30

Ala Thr Arg Ala Lys Leu His Leu Lys Lys Thr His Ile Phe Met Asn  
35 40 45

Ile Ser His Gln Gln Cys Arg Lys  
50 55

<210> 6058

<211> 113

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (98)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6058

Glu Glu Thr Trp Leu Leu Ala Leu Ile Asn Glu Glu Ser His Phe Pro  
1 5 10 15

Gln Ala Thr Asp Ser Thr Leu Leu Glu Lys Leu His Ser Gln His Ala  
20 25 30

Asn Asn His Phe Tyr Val Lys Pro Arg Val Ala Val Asn Asn Phe Gly  
35 40 45

Val Lys His Tyr Ala Gly Glu Val Gln Tyr Asp Val Arg Gly Ile Leu  
50 55 60

## 5309

Glu Lys Asn Arg Asp Thr Phe Arg Asp Asp Leu Leu Asn Leu Leu Arg  
 65 70 75 80

Glu Ser Arg Phe Asp Phe Ile Tyr Asp Leu Phe Glu His Val Ser Lys  
 85 90 95

Pro Xaa Gln Pro Gly Tyr Leu Glu Met Trp Glu Pro Thr Ser Ala Ala  
 100 105 110

Tyr

<210> 6059

<211> 44

<212> PRT

<213> Homo sapiens

<400> 6059

Ala Phe Ile Tyr Leu Asn Phe Glu Phe Leu Asn Phe Leu Val Lys Asn  
 1 5 10 15

Gln Asp Lys His Thr Ser Leu Gly Leu Cys Arg Val Arg Ile Lys Thr  
 20 25 30

Ser Leu Ala Gly Asp Arg Asn Phe Ser Thr Pro Leu  
 35 40

<210> 6060

<211> 59

<212> PRT

<213> Homo sapiens

<400> 6060

Ala Asp Tyr Pro Thr Val Gly Thr Lys Leu Asp Ser Tyr Phe Val Gly  
 1 5 10 15

Leu Ser Phe Leu Ile Leu Thr Ile Tyr His Pro Ile Leu Cys Pro Val  
 20 25 30

Ile Phe Phe Lys Ser Leu Phe Asn Val Leu Gln His Cys Asp Cys Met  
 35 40 45

Leu Ala Thr Leu Leu Leu Glu Cys Ser Phe Ser  
 50 55

## 5310

&lt;210&gt; 6061

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6061

Trp Val Asn Leu Arg Phe Gln Ser Gln Lys Leu Gln Val Val Val Thr  
 1 5 10 15

Phe Leu Ser Ala Trp Ile Lys Pro Leu Lys Cys Gly Lys Cys Cys Gln  
 20 25 30

Ser Arg Ala Ile Ser Leu Leu Ser Ser Met Arg Gly Ile Glu Thr Lys  
 35 40 45

Gln Gln Phe  
 50

&lt;210&gt; 6062

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6062

Lys Leu Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val  
 1 5 10 15

Xaa Thr Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala  
 20 25 30

Arg Gly Gly Val Ser Ser Leu Lys Leu Arg Thr Ile Phe Xaa Val Ala  
 35 40 45

## 5311

Lys Leu His Xaa Met Met Leu Pro Leu Leu Ser Val Leu Ser Gly Pro  
 50 55 60

Leu Phe Thr Ser Thr Arg Tyr Pro Ser  
 65 70

<210> 6063

<211> 59

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (55)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6063

Arg Gly Asn Arg Cys Leu Thr Lys Arg Glu Ala Ile Arg Gly Ile Asp  
 1 5 10 15

Glu Ala Gln Leu Lys Ser Ser Leu Ala Ser Ser Ser Leu Ala Ser Val  
 20 25 30

His Leu Lys Asn Lys Ser Trp Leu Thr Val Gly Ser Thr Arg Phe Glu  
 35 40 45

Ile Arg Trp Leu Tyr Phe Xaa Phe Phe Gly Ile  
 50 55

<210> 6064

<211> 66

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6064

Thr Xaa Met Phe Gln Gln His Arg Phe Ile Cys Asn His Lys Ser Asp  
 1 5 10 15

Thr Phe Arg Met Thr Lys Pro Gln Lys Asn Ala Ile Phe Lys Ala Glu  
 20 25 30

Thr Val Leu Phe Trp Ala Lys Trp Asn Pro Cys Phe Ser Asp Thr Val

## 5312

35 40 45  
Arg Val Glu Ile Lys Asp Thr Glu Asn Leu Pro Leu Gly Asn His Asn  
50 55 60

Tyr Leu  
65

<210> 6065  
<211> 46  
<212> PRT  
<213> Homo sapiens

<400> 6065  
Lys Arg Gln Leu Glu Asn Val Met His Gly Val Phe Lys Lys Thr Lys  
1 5 10 15

Cys Ser Phe Tyr Leu Thr Asp Asn Ser Phe Tyr Thr Leu Tyr Asn Lys  
20 25 30

Ile Ser Thr Arg His Leu Val Gly Lys Val Lys Lys Lys Lys  
35 40 45

<210> 6066  
<211> 136  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (10)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (13)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (76)  
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6066  
Arg Gly Leu Pro Ser Ile Pro Glu Asn Xaa Asn Leu Xaa Glu Tyr Phe  
1 5 10 15

## 5313

Val Ala Val Asp Val Asn Asn Met Leu His Leu Tyr Ala Ser Met Leu  
                   20                  25                  30  
 Tyr Glu Arg Arg Ile Leu Ile Ile Cys Ser Lys Leu Ser Thr Leu Thr  
                   35                  40                  45  
 Ala Cys Ile His Gly Ser Ala Ala Met Leu Tyr Pro Met Tyr Trp Gln  
                   50                  55                  60  
 His Val Tyr Ile Pro Val Leu Pro Pro His Leu Xaa Asp Tyr Cys Cys  
                   65                  70                  75                  80  
 Ala Pro Met Pro Tyr Leu Ile Gly Ile His Leu Ser Leu Met Glu Lys  
                   85                  90                  95  
 Val Arg Asn Met Ala Leu Asp Asp Val Val Ile Leu Asn Val Asp Thr  
                   100                  105                  110  
 Asn Thr Leu Glu Thr Pro Phe Asp Asp Leu Gln Ser Leu Pro Asn Asp  
                   115                  120                  125  
 Val Glu Glu Ser Ile Val Ile Gln  
                   130                  135

&lt;210&gt; 6067

&lt;211&gt; 74

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (40)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6067

His Phe Ala Ala Tyr Gly Asn Val Cys Val Leu Phe Ile Leu Met Asn  
           1                  5                  10                  15  
 Cys Ala Met Thr His Lys Pro Lys Gln Cys Gln Leu Gln Leu Asn Leu  
                   20                  25                  30  
 Gly Arg Asn Pro Trp Cys Phe Xaa Phe Phe Phe Asp Ala Gly Glu Arg  
                   35                  40                  45  
 Leu His Phe Val Thr Asn Leu Leu Pro Asn Arg Lys Ile Tyr Phe Leu  
                   50                  55                  60  
 Ser Asp Arg His His Thr Arg Cys Leu Leu  
                   65                  70

## 5314

&lt;210&gt; 6068

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6068

Gly Lys Pro Gly Ala Pro Leu Gln Pro Trp Asp Asn Leu Arg Ile Pro  
 1 5 10 15

Pro Glu Ala Ser Ser Val Met Asp Ala Val Leu Arg Ile Thr Cys Cys  
 20 25 30

Pro Gly Val Thr Cys Phe His Leu Pro Ala His Gln Pro Ser Ala His  
 35 40 45

Leu Thr Cys Leu Pro Met Asp Trp Gly Leu Pro Gly Pro Pro Pro Tyr  
 50 55 60

Val Asn Leu His Phe Leu Phe Lys Asn Gln Glu Lys Lys Arg Phe Glu  
 65 70 75 80

Asp Pro Lys Ser Cys Gln  
 85

&lt;210&gt; 6069

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (76)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6069

Leu Glu Gly Arg Ala Leu Leu Gln Val Arg Val Gly Val Leu Ser Glu

## 5315

1                      5                      10                      15  
 Ser Cys Val Leu Gly Leu Val Ser Phe Pro Cys Pro Cys Ser Gly Ser  
                          20                      25                      30  
 Val Arg Gln Ile Gly Arg Leu Cys Ser Arg Pro Gln Glu Cys Xaa Ser  
                          35                      40                      45  
 Pro Xaa Leu Ala Gln Tyr Ile Gly Thr Cys Gly Phe Tyr Phe Val Phe  
                          50                      55                      60  
 Asp Val Pro Asp Arg Asn Arg Ala Arg Gly Thr Xaa Lys Thr Thr Val  
                          65                      70                      75                      80  
 Gly Ser

<210> 6070  
 <211> 50  
 <212> PRT  
 <213> Homo sapiens

<400> 6070  
 Ser Lys Glu Arg Val Asp Gly Leu Lys Arg Leu Ala Ser Val Ser Val  
                          1                      5                      10                      15  
 Ala Gly Ser His Leu Ala Ser Asn Trp Lys Gln Asn Phe Trp Gly Val  
                          20                      25                      30  
 Leu Phe Cys Ile Arg Val Cys Phe Met Leu Ser Lys Thr Tyr Phe Arg  
                          35                      40                      45  
 Ser Lys  
                          50

<210> 6071  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (15)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6071  
 Trp Lys Leu Val Gly Pro Pro Gly Leu Thr Gly Ile Arg Thr Xaa Gly



## 5316

|   |    |    |    |
|---|----|----|----|
| 1   | 5  | 10 | 15 |
| Lys Asn Phe Val Arg Pro Gln Lys His Cys Thr Val Asn Ile Leu Glu |    |    |    |
| 20  | 25 | 30 |    |
| Lys Val Cys Gln Thr Gly Ile Asn Asp Ser Met Ile Phe Asn Asp Cys |    |    |    |
| 35  | 40 | 45 |    |
| Lys Leu Arg   |    |    |    |
| 50  |    |    |    |

&lt;210&gt; 6072

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (29)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (47)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (52)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6072

|   |
|---|
| Lys Ser Met Gly Glu Glu Asn Val Lys Met Leu Ser Asp Ile Arg Cys |
| 1 5 10 15   |

|   |
|---|
| Met Lys Ser His Asn Ile Lys Ala Ile Ser Tyr Phe Xaa Arg Gly Ile |
| 20 25 30  |

|   |
|---|
| Phe Leu Leu Pro Leu Leu Val Leu Asp Arg Phe Tyr Lys Met Xaa Asn |
| 35 40 45  |

|                 |
|-----------------|
| Lys Ile Trp Xaa |
| 50              |

&lt;210&gt; 6073

&lt;211&gt; 102

&lt;212&gt; PRT

## 5317

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (50)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (58)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6073

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Ser | Ile | Cys | Cys | Ser | Phe | Leu | Gln | Leu | Tyr | Phe | Cys | Ser | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Trp | Phe | His | Ser | Leu | Leu | Phe | Trp | Asp | Phe | Val | Phe | Arg | Ser | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Phe | Leu | Tyr | Ile | Cys | Met | Gln | Met | Lys | Glu | Gly | Ser | Leu | Tyr | Trp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Xaa | Phe | Ser | Leu | Gln | Leu | Leu | Val | Xaa | Gly | Asp | Leu | Leu | Glu | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Pro | Leu | Lys | Gly | Glu | Asn | Arg | Pro | Leu | Cys | Val | Tyr | Leu | Tyr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asp | Val | Tyr | Met | Gly | Cys | Gly | Gly | Thr | Leu | Leu | Asn | Val | Asn | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Pro | Cys | Gln | Trp | Lys | Asp |
|     |     |     |     | 100 |     |

&lt;210&gt; 6074

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6074

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Gly | Ala | Val | Arg | Lys | Lys | Lys | Lys | Lys | Lys | Ile | Ala | Ile | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Cys | Val | His | Asn | Ser | Arg | Tyr | Asn | Ile | Gln | Ser | Leu | Glu | Gly | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Phe | Trp | Ala | Leu | Asp |
|     |     |     | 35  |     |

## 5318

&lt;210&gt; 6075

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6075

Tyr Ser Phe Asp Asn Thr Arg Val Ser Glu Ile Pro Asp Thr Ser Val  
 1 5 10 15

Gln Asn Ala Met Asp Leu Leu Phe Tyr Ser Cys Gln Pro Phe Ser Ile  
 20 25 30

Pro Ile Gln Lys Arg  
 35

&lt;210&gt; 6076

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6076

Thr Leu Ser Asp Val Gly Cys Pro His Gln Asn Ile Cys Thr Ser Cys  
 1 5 10 15

Phe Cys Pro Thr Leu Glu Ala Ala Glu Lys Lys Gly Lys Gln Gly Ser  
 20 25 30

Arg Asn Leu Cys Tyr Val Phe Ser Pro Leu Tyr Leu Phe Leu Trp Xaa  
 35 40 45

Val Val Gln Glu Ile Leu Phe Ser Cys Ser Lys Leu Ile Lys Arg Ser  
 50 55 60

Asn Ile Arg Asn Tyr Asp Asn Ser Leu  
 65 70

&lt;210&gt; 6077

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5319

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (46)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6077

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Arg | Gly | Arg | Glu | Ile | Ser | Lys | Val | Phe | Thr | Ser | Ser | Leu | Lys | Gly |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Ser | Asn | Ser | Ser | Ser | Pro | Cys | Tyr | Phe | Gly | Val | Ser | His | Tyr |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Thr | His | Gln | Lys | Ile | His | Ser | Phe | Lys | Cys | Leu | Xaa | Val | Leu |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

Ser

&lt;210&gt; 6078

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (25)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (26)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (30)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

## 5320

&lt;400&gt; 6078

Pro Asn Ala Asp Gln Lys Tyr Ser Thr Asp Lys Met Xaa Glu Pro Xaa  
 1 5 10 15

Val Tyr Val Lys Ser Leu Tyr Thr Xaa Xaa Gly Pro Asp Xaa Tyr Phe  
 20 25 30

Leu Leu Leu Ile Gly Gly  
 35

&lt;210&gt; 6079

&lt;211&gt; 303

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (14)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (118)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (147)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6079

Ala Phe Ser Ser Ser Glu Asp Asn Lys Xaa Gly Lys Arg Xaa Arg Thr  
 1 5 10 15

Asn Ser Arg Ser Thr Pro Thr Thr Pro Gln Gly Lys Pro Glu Thr Thr  
 20 25 30

Phe Leu Asp Gln Gly Cys Ser Ser Pro Val Leu Ile Asp Cys Pro His  
 35 40 45

Pro Asn Cys Asn Lys Lys Tyr Lys His Ile Asn Gly Leu Arg Tyr His  
 50 55 60

Gln Ala His Ala His Leu Asp Pro Glu Asn Lys Leu Glu Phe Glu Pro

## 5321

|   |     |    |     |    |     |     |
|---|-----|----|-----|----|-----|-----|
| 65  |     | 70 |     | 75 |     | 80  |
| Asp Ser Glu Asp Lys Ile Ser Asp Cys Glu Glu Gly Leu Ser Asn Val |     |    |     |    |     |     |
|   | 85  |    | 90  |    | 95  |     |
| Ala Leu Glu Cys Ser Glu Pro Ser Thr Ser Val Ser Ala Tyr Asp Gln |     |    |     |    |     |     |
|   | 100 |    | 105 |    | 110 |     |
| Leu Lys Ala Pro Ala Xaa Pro Gly Ala Gly Asn Pro Pro Gly Thr Pro |     |    |     |    |     |     |
|   | 115 |    | 120 |    | 125 |     |
| Lys Gly Lys Arg Glu Leu Met Ser Asn Gly Pro Gly Ser Ile Ile Gly |     |    |     |    |     |     |
|   | 130 |    | 135 |    | 140 |     |
| Ala Lys Xaa Gly Lys Asn Ser Gly Lys Lys Lys Gly Leu Asn Asn Glu |     |    |     |    |     |     |
|   | 145 |    | 150 |    | 155 | 160 |
| Leu Asn Asn Leu Pro Val Ile Ser Asn Met Thr Ala Ala Leu Asp Ser |     |    |     |    |     |     |
|   | 165 |    | 170 |    | 175 |     |
| Cys Ser Ala Ala Asp Gly Ser Leu Ala Ala Glu Met Pro Lys Leu Glu |     |    |     |    |     |     |
|   | 180 |    | 185 |    | 190 |     |
| Ala Glu Gly Leu Ile Asp Lys Lys Asn Leu Gly Asp Lys Glu Lys Gly |     |    |     |    |     |     |
|   | 195 |    | 200 |    | 205 |     |
| Lys Lys Ala Asn Asn Cys Lys Thr Asp Lys Asn Leu Ser Lys Leu Lys |     |    |     |    |     |     |
|   | 210 |    | 215 |    | 220 |     |
| Ser Ala Arg Pro Ile Ala Pro Ala Pro Ala Pro Thr Pro Pro Gln Leu |     |    |     |    |     |     |
|   | 225 |    | 230 |    | 235 | 240 |
| Ile Ala Ile Pro Thr Ala Thr Phe Thr Thr Thr Thr Thr Gly Thr Ile |     |    |     |    |     |     |
|   | 245 |    | 250 |    | 255 |     |
| Pro Gly Leu Pro Ser Leu Thr Thr Thr Val Val Gln Ala Thr Pro Lys |     |    |     |    |     |     |
|   | 260 |    | 265 |    | 270 |     |
| Ser Pro Pro Leu Lys Pro Ile Gln Pro Lys Pro Thr Ile Met Gly Glu |     |    |     |    |     |     |
|   | 275 |    | 280 |    | 285 |     |
| Pro Ile Thr Val Asn Pro Ala Leu Val Ser Leu Lys Asp Lys Lys     |     |    |     |    |     |     |
|   | 290 |    | 295 |    | 300 |     |

&lt;210&gt; 6080

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

5322

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6080

Arg Leu Ser Gln His Pro Tyr His Thr Val Gln Lys Ser Glu Leu Gln  
1 5 10 15

Arg Leu Cys Ser Val Ser Trp Ser Thr Ser Lys Phe Val Val Arg Lys  
20 25 30

Val Arg Cys Arg Asn Leu Arg Leu Gln Arg Leu Cys Ser Val Ser Trp  
35 40 45

Xaa Thr Ser Thr Phe Phe Val Val Asn Ile Gln Ser His  
50 55 60

&lt;210&gt; 6081

&lt;211&gt; 77

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6081

Pro Asn Pro Ala Leu Thr Ala Pro Gln Arg Ile Pro Val Ala Ala Gln  
1 5 10 15

Pro Pro Ala Pro Pro Ser Pro Glu Leu Arg Arg Glu Pro Gln Gly Gly  
20 25 30

Ala Met Arg Thr Gly Val Trp Trp Ser Thr Tyr Gly Ser Trp Pro Ala  
35 40 45

Ser Gly Ala Val Ala Gly Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro  
50 55 60

His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg  
65 70 75

&lt;210&gt; 6082

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (22)

## 5323

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (33)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6082

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ala | Gly | Pro | Ser | His | Pro | Trp | Ile | Ser | Ser | Cys | Thr | Thr | Leu | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Gln | His | Gln | Xaa | Leu | Pro | Arg | Ser | Pro | Pro | Ala | Gln | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Gly | Asn | Val | Ser | Ser | Ser | Pro | Gly | Leu | Gln | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |

<210> 6083

<211> 52

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (10)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (41)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6083

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Glu | Gly | His | Glu | Arg | Glu | Arg | Ser | Xaa | Glu | Ser | Gly | Glu | Glu | Asp |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Leu | Thr | Asp | Glu | Pro | Arg | Arg | Ala | Cys | Leu | Ser | His | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Cys | Gln | Leu | Leu | Gly | Gly | Gln | Xaa | Pro | Ala | Leu | Arg | Asn | Ser | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Val | Leu | Gly | Glu |
|     |     |     | 50  |

<210> 6084

<211> 78



## 5324

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6084

Leu Val Leu His Tyr Phe Pro Arg Glu Phe Leu Gln Val Asn Val His  
 1 5 10 15

Pro Phe Asp Leu Glu Ala Asp Ser Gln Phe Cys Leu Phe Gly Lys Ser  
 20 25 30

Ala Ser Glu Leu Asn Phe Leu Val Cys Lys Met Gly Leu Arg Lys Cys  
 35 40 45

Gly Leu Leu Phe Gln Arg Leu Leu Leu Gly Trp Asn Glu Ile Met Cys  
 50 55 60

Val Thr Lys Ala Leu Glu Thr Phe Trp Asn Leu Lys Ala Ile  
 65 70 75

&lt;210&gt; 6085

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (45)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (51)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6085

Ala Leu Ser Val Cys Asp Leu Leu Lys Asn Lys Phe Phe Val Lys Glu  
 1 5 10 15

Asn Thr Ser Leu Lys Asn Glu Lys Ala Ile Leu Ser Leu Ile Asn Leu  
 20 25 30

Ile Gln Asp Pro Ser Ile Ile Asn Leu Thr Val Leu Xaa Phe Thr Glu  
 35 40 45

Ile Ser Xaa Asn Gln Ser Gln Lys Ile Pro Pro Cys Thr Asn Leu Leu  
 50 55 60

Pro Leu His  
 65

## 5325

&lt;210&gt; 6086

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (44)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (48)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (55)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6086

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Ile | Met | Thr | Pro | Leu | Val | Ser | Cys | Gly | Met | Gly | Arg | Ile | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Phe | Phe | Cys | Thr | Phe | Thr | Trp | Arg | Leu | Phe | Leu | Leu | Arg | Xaa | Phe |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Met | Gly | Phe | Lys | Ala | Leu | His | Leu | Pro | Asn | Xaa | Gly | Lys | Cys | Xaa |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Tyr | Cys | Ile | Phe | Tyr | Xaa | Phe | Gly | Pro | Lys | Gly | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |

&lt;210&gt; 6087

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6087

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Glu | Glu | Cys | Asn | Pro | Phe | Tyr | Lys | Met | Tyr | Thr | Leu | Cys | Tyr | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

## 5326

Leu Leu Asn Phe Gly Leu Val Ile Pro Thr Asp Ala Lys Phe Phe Leu  
                   20                  25                  30

Gln Ser Thr Glu Ile Ile Gln Ile Phe Leu His Cys Gln Gln Asp Glu  
                   35                  40                  45

Ile Val  
           50

<210> 6088

<211> 141

<212> PRT

<213> Homo sapiens

<400> 6088

Trp Lys Lys Tyr Phe Lys Thr Phe Ile Asn Gly Lys Val Val Trp Gly  
       1                  5                  10                  15

Ser Trp Phe Asp His Val Lys Gly Trp Trp Glu Met Lys Asp Arg His  
                   20                  25                  30

Gln Ile Leu Phe Leu Phe Tyr Glu Asp Ile Lys Arg Asp Pro Lys His  
                   35                  40                  45

Glu Ile Arg Lys Val Met Gln Phe Met Gly Lys Lys Val Asp Glu Thr  
           50                  55                  60

Val Leu Asp Lys Ile Val Gln Glu Thr Ser Phe Glu Lys Met Lys Glu  
       65                  70                  75                  80

Asn Pro Met Thr Asn Arg Ser Thr Val Ser Lys Ser Ile Leu Asp Gln  
                   85                  90                  95

Ser Ile Ser Ser Phe Met Arg Lys Gly Thr Val Gly Asp Trp Lys Asn  
                   100                  105                  110

His Phe Thr Val Ala Gln Asn Glu Arg Phe Asp Glu Ile Tyr Arg Arg  
                   115                  120                  125

Lys Met Glu Gly Thr Ser Ile Asn Phe Cys Met Glu Leu  
           130                  135                  140

<210> 6089

<211> 65

<212> PRT

<213> Homo sapiens

## 5327

&lt;400&gt; 6089

Asn Lys His Leu Glu Ala Ile Phe Gly Leu Ile Lys Ile Val Leu Gly  
 1 5 10 15

Arg Ala Trp Trp Leu Thr Pro Ala Ile Pro Ala Leu Trp Glu Ala Glu  
 20 25 30

Asp Ser Gly Phe Leu Glu Leu Arg Ser Trp Glu Thr Ser Leu Gly Asn  
 35 40 45

Met Val Ile Pro Val Cys Leu Phe Lys Ile Lys Lys Ile Asn Glu Val  
 50 55 60

Met  
 65

&lt;210&gt; 6090

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (13)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6090

Val Ala Lys Gly Leu Leu Ser His Leu Cys Pro Pro Xaa Ile Leu Lys  
 1 5 10 15

Ala Arg Ser Leu Glu Phe Glu Leu Cys Pro His Met Pro Pro Arg His  
 20 25 30

Gln Gln Ser Lys Met Lys Ser Leu His Cys Leu Ser Val Asp Pro Thr  
 35 40 45

Leu Ser Pro His Trp Arg Gly Arg Gly Gly Gly Leu Arg Met Ser Ser  
 50 55 60

Ser Cys Pro Gly Cys Asn Met Val Lys Asp Glu Arg Lys Glu Met Leu  
 65 70 75 80

Gly Ala Ser Leu His  
 85

&lt;210&gt; 6091

## 5328

<211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 6091  
 Gln Glu Pro Ser Ser Arg Val Ser Cys Phe Lys Ala Pro Tyr Pro Phe  
 1 5 10 15  
 Leu Arg Val Thr Asn Thr Cys Ala Arg Ser Leu Pro Phe Pro Ser Ser  
 20 25 30  
 Pro Cys Ile Trp Leu Ile Thr Gly Gln Leu Pro Ala Ser Leu Gln Phe  
 35 40 45  
 Gly Arg Trp Val Gly Asn Asp His His Ser Pro Arg Ser Pro Asp Gly  
 50 55 60  
 Leu Val Phe Arg Ala Leu His Arg His Leu Gln Gln Ala Pro Ala Arg  
 65 70 75 80  
 Pro Glu Val Ile Leu Arg Arg Asp Gly Ser  
 85 90

<210> 6092  
 <211> 45  
 <212> PRT  
 <213> Homo sapiens

<400> 6092  
 Leu Gln Leu Trp Ile Ala Tyr Phe Glu Lys Gly Glu Leu Gln Ile Leu  
 1 5 10 15  
 Pro Lys Asp Gly Glu Lys His Ile Lys Lys Ile Pro Thr Phe Arg Asn  
 20 25 30  
 Ser Phe Gln Gln Leu Leu Leu Glu Ile Phe Lys Leu Ile  
 35 40 45

<210> 6093  
 <211> 49  
 <212> PRT  
 <213> Homo sapiens

<400> 6093  
 Ile Ser Asp Lys Phe Pro Gly Asn Ala Asp Phe Thr Val Gln Gly Pro  
 1 5 10 15

## 5329

His Phe Gly Asn His Thr Asn Arg Asn Leu Met Gln Thr Gln Gly Thr  
20 25 30

Tyr Gln Lys Ile Phe Asn Gln Val Ile Leu His Asp Lys Gly Gln Gln  
35 40 45

Cys

<210> 6094

<211> 58

<212> PRT

<213> Homo sapiens

<400> 6094

Thr Gly Phe His His Val Ser Gln Ala Ser Leu Glu Leu Leu Thr Ser  
1 5 10 15

Gly Asp Pro Pro Ala Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Ile  
20 25 30

Ser His Arg Ala Trp Pro Asn Asn Trp Asn Ile Phe Ile Met Lys Met  
35 40 45

Ser Ser Ala Leu Pro Lys Glu Thr Thr Asn  
50 55

<210> 6095

<211> 89

<212> PRT

<213> Homo sapiens

<400> 6095

Cys Lys His Cys Ile Ser Tyr Val Glu Met Val Lys Asp Asp Tyr Glu  
1 5 10 15

Asp Asp Ser His Val Phe Arg Lys Pro Ala Asn Asp Ile Thr Ser Gln  
20 25 30

Leu Glu Ile Asn Phe Gly Asn Leu Pro Arg Pro Gly Arg Gly Ala Arg  
35 40 45

Gly Gly Thr Arg Gly Gly Arg Gly Arg Ile Arg Arg Ala Glu Asn Tyr  
50 55 60

Gly Pro Arg Ala Glu Val Val Met Gln Asp Val Ala Pro Asn Pro Asp  
65 70 75 80

## 5330

Asp Pro Glu Asp Phe Pro Ala Leu Ser  
85

<210> 6096

<211> 32

<212> PRT

<213> Homo sapiens

<400> 6096

Lys Leu Lys Met Leu Ala Glu His Phe Val Val Leu Gln Ala Leu Leu  
1 5 10 15

Ile Phe His Cys Ser Thr Cys Cys Trp Gln Ser Asn Phe Ser Glu Leu  
20 25 30

<210> 6097

<211> 65

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (64)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6097

Ala Glu His Cys Ser Pro Ile Leu Val Leu Ile Trp Lys Phe Leu Gly  
1 5 10 15

His Tyr Ala Asp Lys Lys Thr Arg Thr Pro Gly Ala Arg Lys Thr Cys  
20 25 30

Cys Lys Ser Leu Val Cys Ser Tyr Glu Cys Pro Ser Thr Leu Glu Glu  
35 40 45

Ala Leu Asp Ser Pro Val Pro Ser Phe Leu Gly Ala Arg Val Pro Xaa  
50 55 60

Cys  
65

## 5331

&lt;210&gt; 6098

&lt;211&gt; 47

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (33)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6098

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Tyr | Cys | Tyr | Ser | Glu | Glu | Ser | Gln | Leu | Thr | Asp | Leu | Asp | Asp | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asp | Ala | Val | Gln | Met | Arg | Glu | Gly | Cys | Lys | Tyr | Cys | Phe | Ser | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Glu | Leu | Thr | Val | Ala | Lys | Val | Gly | Tyr | Ser | Ile | Glu | Ser | Leu |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |

&lt;210&gt; 6099

&lt;211&gt; 165

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (149)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (153)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6099

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Arg | His | Glu | Glu | Thr | Ser | Ile | Ala | Leu | Gln | Asp | Asn | Tyr | Glu | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Tyr | Thr | Ala | Ile | Ser | Val | Ile | Lys | Asn | Leu | Leu | Ile | Lys | His | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Asp | Thr | Arg | Tyr | Gln | His | Lys | Asn | Gln | Gln | Ala | Lys | Ile | Ala | Gln |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Leu | Pro | Phe | Val | Gly | Leu | Leu | Leu | Glu | Asn | Ile | Gln | Arg | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Arg | Asp | Thr | Leu | Tyr | Ser | Cys | Ala | Ala | Met | Pro | Asn | Ser | Ala |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



## 5332

| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ser | Arg | Asp | Glu | Phe | Pro | Cys | Gly | Phe | Thr | Ser | Pro | Ala | Asn | Arg | Gly |  |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |  |
| Ser | Leu | Ser | Thr | Asp | Lys | Asp | Thr | Ala | Tyr | Gly | Ser | Phe | Gln | Asn | Gly |  |
|     |     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |  |
| His | Gly | Ile | Lys | Arg | Glu | Asp | Ser | Arg | Gly | Ser | Leu | Phe | Pro | Glu | Gly |  |
|     |     |     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |  |
| Ala | Thr | Gly | Phe | Pro | Asp | Gln | Gly | Asn | Thr | Gly | Glu | Asn | Thr | Arg | Gln |  |
|     |     |     |     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |  |
| Asn | Ser | Thr | Arg | Xaa | Ile | Val | Ser | Xaa | Tyr | Asn | Arg | Leu | Asp | Gln | Tyr |  |
| 145 |     |     |     | 150 |     |     |     | 155 |     |     |     | 160 |     |     |     |  |
| Glu | Ile | Thr | Thr | Ser |     |     |     |     |     |     |     |     |     |     |     |  |
|     |     |     |     |     | 165 |     |     |     |     |     |     |     |     |     |     |  |

<210> 6100

<211> 61

<212> PRT

<213> Homo sapiens

<220>

&lt;221&gt; SITE

<222> (44)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6100

Gln Arg Gly Arg Trp Lys Gln Cys Ser Trp Lys Leu Leu Leu Ser Pro  
1 5 10 15

Leu Ser His His Ser Arg His Leu Leu Gln Ala Gly Arg His Val Ser  
20 25 30

Val Arg Phe Leu Pro Gly Asp Ile Arg Ser Pro Xaa Ile Gln Ile Lys  
35 40 45

Cys Asn Ile Leu Gln Thr Ala Leu Leu Arg Glu Ile Ser  
50 55 60

<210> 6101

<211> 156

<212> PRT

<213> Homo sapiens

## 5333

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (92)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (110)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (146)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6101

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ile | Pro | Arg | Ala | Ser | Gly | Ile | Arg | His | Glu | His | Leu | Arg | Ser | His |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gln | Glu | Lys | Val | Val | Ala | Cys | Pro | Thr | Cys | Gly | Gly | Met | Phe | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Asn | Thr | Lys | Phe | Leu | Asp | His | Ile | Arg | Arg | Gln | Thr | Ser | Leu | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gln | His | Phe | Gln | Cys | Ser | His | Cys | Ser | Lys | Arg | Phe | Ala | Thr | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Leu | Arg | Asp | His | Met | Arg | Asn | His | Val | Asn | His | Tyr | Lys | Cys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Cys | Asp | Met | Thr | Cys | Pro | Leu | Pro | Ser | Xaa | Leu | Arg | Asn | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Phe | Arg | His | Ser | Glu | Asp | Arg | Pro | Phe | Lys | Cys | Xaa | Cys | Cys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Tyr | Ser | Cys | Lys | Asn | Leu | Ile | Asp | Leu | Gln | Lys | His | Leu | Asp | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ser | Glu | Glu | Pro | Ala | Tyr | Arg | Cys | Asp | Phe | Glu | Asn | Cys | Thr | Ser |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Xaa | Asp | Pro | Leu | Leu | Tyr | Gln | Val | Pro | Leu | Pro |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |

&lt;210&gt; 6102

&lt;211&gt; 65

## 5334

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6102

Phe Cys Leu Leu Leu Ala Gly Glu Glu Ala Met Ser Trp Tyr Ser Gln  
1 5 10 15

Trp Ser Gln Asp Pro Glu Cys Val Ala Lys Pro Tyr Thr Ala Phe His  
20 25 30

Gly Leu Phe Leu Gly Ala Arg Val Gly Gly Asp Met Val Leu Gly Ser  
35 40 45

Asn Leu Pro Cys Asn Arg Trp Arg Ala Val Phe Ser Met Ala Pro Ala  
50 55 60

Val

65

&lt;210&gt; 6103

&lt;211&gt; 72

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (49)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6103

Leu Gln Val Thr Leu Ser Ser Trp Pro Xaa Ile Ala Pro Arg Leu Phe  
1 5 10 15

Leu Pro His Trp Gly Gln Ser Phe Pro Trp Thr Lys Glu Arg Xaa Leu  
20 25 30

Gln Pro Phe Phe Lys Ser Leu Gly Pro Gly Pro Trp His Gln His His  
35 40 45

## 5335

Xaa Ser Leu Tyr Ser Ile His Gln Lys His Leu Lys Pro Thr Gln Ile  
 50 55 60

Cys Ser Met Gly Ser Ile His Val  
 65 70

<210> 6104

<211> 137

<212> PRT

<213> Homo sapiens

<400> 6104

Val Tyr Lys Tyr Leu Phe Phe Lys Arg Arg Cys Cys Ala Cys Glu Thr  
 1 5 10 15

Ile Leu Phe Phe Phe Phe Phe Phe Phe Phe Phe Phe Leu Val Thr Ala  
 20 25 30

Lys Asp Arg Glu Pro Phe His Phe Gly His Thr Gly Leu Leu Ser Arg  
 35 40 45

Ser His Phe Ser Ser Trp Leu Leu Lys Ile Thr Ala Ser Pro Val Pro  
 50 55 60

Ser Trp Arg Ser Ser Arg Gly Arg Ala Asp Phe Ser Pro Thr Gly Gly  
 65 70 75 80

Thr Met Trp Gly Ser Glu Gly Trp Glu Gly Asp Phe Pro Leu Glu Trp  
 85 90 95

Trp Ser Cys Trp Gly Leu Ile Ser Arg Asp Pro Lys Gly Gly Leu Cys  
 100 105 110

Arg Arg Phe His Ile Gly Gly Ala Leu Ser Leu Ala Ala Val Arg Val  
 115 120 125

Gly Pro Gly Cys Gly Val Gln Thr Ala  
 130 135

<210> 6105

<211> 65

<212> PRT

<213> Homo sapiens

<400> 6105

Gly Asn Ser Arg Val Asp Pro Arg Val Arg Arg Asn Val Thr Arg Val  
 1 5 10 15

## 5336

Arg Gly Ser Tyr Leu Tyr Ile Gly Phe Pro Ala Glu Asn Arg Pro Leu  
                   20                  25                  30

Leu Tyr Arg Phe Trp Val His Asn Leu Ala Leu Leu Val Asn Pro Arg  
                   35                  40                  45

Asp Leu Ser Asp Pro Pro Pro Pro Val Phe Phe Leu Phe Leu Phe Leu  
           50                  55                  60

Phe  
   65

<210> 6106  
 <211> 50  
 <212> PRT  
 <213> Homo sapiens

<400> 6106  
 Tyr Tyr Lys Ser Tyr Cys Thr His Phe Val Leu Glu Lys Asn Thr Glu  
   1                  5                  10                  15

Ala Val Ala Gln Thr Leu Phe Asn Ile Arg Glu Phe Ile Leu Glu Lys  
                   20                  25                  30

Asn Pro Ala Asn Val Met Asn Leu Glu Lys His Phe Phe Ser Lys Thr  
           35                  40                  45

Thr Ala  
   50

<210> 6107  
 <211> 67  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (46)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (47)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6107

## 5337

Val Asp Arg Ala Ile Ser Ile Thr Leu Arg Pro Leu Trp Val Ile Gly  
 1 5 10 15

Ala Asp Lys Val Pro Cys Ile Ala Asp Glu Ile Ser Pro Ser Trp Thr  
 20 25 30

Phe Pro Arg Asn Gly Pro Gly Val Ser Ser Asn Leu Ser Xaa Xaa Ile  
 35 40 45

Thr Cys Leu Glu Ile Thr Leu Glu Tyr Val Ser Tyr Lys Ala Arg Ser  
 50 55 60

His Gly Asn  
 65

<210> 6108  
 <211> 47  
 <212> PRT  
 <213> Homo sapiens

<400> 6108  
 Thr Arg Glu Arg Arg Gly Gly Asn Met Lys Val Asn Leu Asn Asn Phe  
 1 5 10 15

Cys Asn Thr Ser Tyr Leu Gln Thr Ile Gly Phe Met Leu Leu His Ser  
 20 25 30

Arg Cys Asp Leu Ser Tyr Val Ser Asp Arg Phe Tyr Glu Leu Phe  
 35 40 45

<210> 6109  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 6109  
 Gly Pro Ala Lys Gly Gly Lys Lys Lys Lys Asp Pro Asn Ala Pro Lys  
 1 5 10 15

Arg Pro Pro Ser Gly Phe Phe Leu Phe Cys Ser Glu Phe Arg Pro Lys  
 20 25 30

Ile Lys Ser Thr Asn Pro Gly Ile Ser Ile Gly Asp Val Ala Lys Lys  
 35 40 45

Leu Gly Glu Met Trp Asn Asn Leu Asn Asp Ser Glu Lys Gln Pro Tyr  
 50 55 60

## 5338

Ile Thr Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Val Ala  
 65 70 75 80

Asp Tyr Lys Ser Lys Gly Lys Phe Asp Gly Ala Lys Gly Pro Ala Lys  
 85 90 95

Val Ala Arg Lys Lys Val Glu Glu Glu Asp Glu Glu Glu Glu Glu Glu  
 100 105 110

Glu Glu Glu Glu Glu Glu Glu Glu Asp Glu  
 115 120

<210> 6110  
 <211> 82  
 <212> PRT  
 <213> Homo sapiens

<400> 6110  
 Val Asp Phe Leu Phe Ala Ile Asn Gln Ala Lys Val Asn Ala Ile Ile  
 1 5 10 15

Ser Arg Phe Met Val Asn Lys Phe Glu Val Trp Ile Asn Leu Ser His  
 20 25 30

Ile Phe Tyr Cys Ser Leu Val Lys Lys Gly Thr Arg Lys Lys Ile Ser  
 35 40 45

Ser Ser Leu Val Leu Ser Gln Cys Gly Asp Cys Arg Lys Leu Thr Met  
 50 55 60

Pro Ala Cys Val Asn Val Trp Leu Thr Val Lys Ala Ser Phe Leu Ala  
 65 70 75 80

Ala Cys

<210> 6111  
 <211> 34  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (34)  
 <223> Xaa equals any of the naturally occurring L-amino acids

## 5339

&lt;400&gt; 6111

Met Val Leu Arg Lys Tyr Phe Leu Trp Lys Ile Gly Arg Lys Tyr Phe  
 1 5 10 15

Asn Leu Asn Ile Lys Lys Ile Gly Asn Cys Tyr Phe Gln Gln Gln Ser  
 20 25 30

Pro Xaa

&lt;210&gt; 6112

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6112

Gly Ser Pro Gly Ala His Glu Pro Cys Gln Ala Pro Ala Gly Ser Ser  
 1 5 10 15

Arg His Val Pro Asp Leu Trp Gly Pro Arg Glu Gly Thr Phe Pro Ser  
 20 25 30

Trp Glu Arg Arg Arg Ser Gly Gln Leu Gly Glu Gly Cys Glu His Phe  
 35 40 45

Pro Pro Gly Arg Asp Gln Gly Asp Leu His Ala Leu Arg Arg Ala Trp  
 50 55 60

Lys Gly Ser Glu Lys Pro Ala Asp Arg Pro Cys Pro Ser Ser Arg Asp  
 65 70 75 80

His Leu Met Asn His Val Phe  
 85

&lt;210&gt; 6113

&lt;211&gt; 253

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6113

Gln Asn Leu Pro Leu Thr Arg Arg Arg Pro Thr Gly Ser Cys Val Cys  
 1 5 10 15

Leu Gly Arg Gly Gly Pro Gly Gly Gly Gly Leu Arg Ala Gly Ser Arg  
 20 25 30

His Pro Ala Pro Ala Ala Met His Pro Arg Arg Pro Asp Gly Phe Asp



## 5340

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Gly Leu Gly Tyr Arg Gly Gly Ala Arg Asp Glu Gln Gly Phe Gly Gly |     |     |
| 50  | 55  | 60  |
| Ala Phe Pro Ala Arg Ser Phe Ser Thr Gly Ser Asp Leu Gly His Trp |     |     |
| 65  | 70  | 75  |
| Val Thr Thr Pro Pro Asp Ile Pro Gly Ser Arg Asn Leu His Trp Gly |     |     |
|   | 85  | 90  |
| Glu Lys Ser Pro Pro Tyr Gly Val Pro Thr Thr Ser Thr Pro Tyr Glu |     |     |
|   | 100 | 105 |
| Gly Pro Thr Glu Glu Pro Phe Ser Ser Gly Gly Gly Gly Ser Val Gln |     |     |
|   | 115 | 120 |
| Gly Gln Ser Ser Glu Gln Leu Asn Arg Phe Ala Gly Phe Gly Ile Gly |     |     |
|   | 130 | 135 |
| Leu Ala Ser Leu Phe Thr Glu Asn Val Leu Ala His Pro Cys Ile Val |     |     |
|   | 145 | 150 |
| Leu Arg Arg Gln Cys Gln Val Asn Tyr His Ala Gln His Tyr His Leu |     |     |
|   | 165 | 170 |
| Thr Pro Phe Thr Val Ile Asn Ile Met Tyr Ser Phe Asn Lys Thr Gln |     |     |
|   | 180 | 185 |
| Gly Pro Arg Ala Leu Trp Lys Gly Met Gly Ser Thr Phe Ile Val Gln |     |     |
|   | 195 | 200 |
| Gly Val Thr Leu Gly Ala Glu Gly Ile Ile Ser Glu Phe Thr Pro Leu |     |     |
|   | 210 | 215 |
| Pro Arg Glu Val Leu His Lys Trp Ser Pro Lys Gln Ile Gly Glu His |     |     |
|   | 225 | 230 |
| Leu Leu Leu Lys Ser Leu Asn Leu Arg Gly Gly Asn Ala             |     |     |
|   | 245 | 250 |

&lt;210&gt; 6114

&lt;211&gt; 168

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

## 5341

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (115)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6114

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Phe | Cys | Pro | Ala | Ala | Ala | Xaa | Lys | Ala | Ser | His | Pro | Thr | Pro |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Phe | Leu | Val | Arg | Ser | Gly | Leu | Ala | Trp | Gly | Pro | Pro | Phe | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Leu | Val | Cys | Leu | Tyr | Pro | Ala | Leu | Leu | Ser | Ser | Leu | Cys | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Leu | Ser | Leu | Phe | Ala | Ser | Pro | Phe | Ser | Leu | Ser | Cys | Arg | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Leu | Gly | Pro | Pro | Trp | Phe | Cys | Leu | Val | Ser | Leu | Ser | Leu | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Ser | Leu | Tyr | Ser | Phe | Ser | Arg | Ala | Gly | Pro | Thr | Gly | Arg | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Ser | Gln | Ile | Asn | Pro | His | Thr | Asn | Lys | Ile | Gln | Asn | Gln | Ile |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Xaa | Thr | Gly | Ala | Gly | Thr | Leu | Arg | Arg | Ser | Arg | Ile | Lys | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Val | Ser | Glu | Ala | Leu | Leu | Thr | Cys | Val | Cys | Val | Cys | Val | Cys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Gly | Glu | Gly | Asp | Leu | Asp | Cys | Ser | Ile | Arg | Thr | Leu | Ser | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Glu | Gly | Arg | Trp | Glu | Asp | Asp |
|     |     |     |     |     | 165 |     |     |

<210> 6115

<211> 180

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (140)

## 5342

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (157)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (169)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6115

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Glu | Val | Glu | Asn | Asn | Thr | Leu | Gly | Ser | Pro | Ala | Ala | Ser | Glu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | His | Leu | Lys | Pro | Thr | Tyr | Trp | Phe | Ser | Ala | His | Leu | His | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Phe | Ala | Ala | Leu | Met | Gln | His | Gln | Ala | Lys | Asp | Lys | Gly | Gln | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Ala | Thr | Lys | Phe | Leu | Ala | Leu | Asp | Lys | Cys | Leu | Pro | His | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Phe | Leu | Gln | Ile | Leu | Glu | Ile | Glu | His | Asp | Pro | Ser | Ala | Pro | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Leu | Glu | Tyr | Asp | Ile | Glu | Trp | Leu | Thr | Ile | Leu | Arg | Ala | Thr | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Ile | Asn | Val | Thr | Gly | Arg | Leu | Trp | Asn | Met | Pro | Glu | Asn | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | His | Ala | Arg | Trp | Asp | Tyr | Ser | Ala | Thr | Glu | Glu | Gly | Met | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Leu | Glu | Lys | Leu | Asn | His | Asp | Leu | Lys | Xaa | Pro | Cys | Asn | Phe |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Thr | Ala | Ala | Cys | Tyr | Asp | Pro | Ser | Lys | Pro | Xaa | Thr | Gln | Met |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Leu | Ile | His | Arg | Ile | Asn | Pro | Xaa | Thr | Thr | Glu | Phe | Cys | Ala | Gln |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Leu | Gly | Ile | Ile |
|     |     |     | 180 |

## 5343

&lt;210&gt; 6116

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6116

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Tyr | Lys | Ile | Cys | Met | Tyr | Leu | Ala | Leu | Asn | His | Asn | Leu | Lys | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Met | Asn | Ser | Phe | Thr | Ser | Ile | Asp | Ser | Gln | Asn | Ser | Asn | Xaa | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Ser | Glu | Pro | Val | Arg | Thr | Pro | Pro | His | Pro | Ser | Ser | Cys | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Asp | Leu | Ser | Thr | Ala | Ile | Ile | Leu | Cys | Lys | Ala | Val | Val | Leu | Thr |  |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |  |

&lt;210&gt; 6117

&lt;211&gt; 72

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (10)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (62)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 5344

&lt;221&gt; SITE

&lt;222&gt; (69)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6117

Thr Leu Thr Lys Gly Xaa Lys Ser Trp Xaa Ser Thr Ala Val Thr Thr  
 1 5 10 15

Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg Ala  
 20 25 30

Gln Leu Thr Arg Cys Gln Leu Gly Ser Cys Ser Gly Gly Arg Lys Arg  
 35 40 45

Leu Arg Arg Phe Pro Ala Leu Ser Pro Gln Pro Xaa Arg Xaa Ser Gly  
 50 55 60

Ser Gln Asp Val Xaa Phe Asp Asp  
 65 70

&lt;210&gt; 6118

&lt;211&gt; 257

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6118

Pro Arg Val Arg Ala Phe Ala Gly Val Pro Thr Arg Gly Arg Thr Arg  
 1 5 10 15

Gly Gln Ser Arg Arg Cys Ala Ala Glu Ala Ser Ala Gly Pro Glu Arg  
 20 25 30

Asp Ala Arg Pro Gly Ala Pro Ala Ala Gly Thr Met Gly Ala Ala His  
 35 40 45

Ser Ala Ser Glu Glu Val Arg Glu Leu Glu Gly Lys Thr Gly Phe Ser  
 50 55 60

Ser Asp Gln Ile Glu Gln Leu His Arg Arg Phe Lys Gln Leu Ser Gly  
 65 70 75 80

Asp Gln Pro Thr Ile Arg Lys Glu Asn Phe Asn Asn Val Pro Asp Leu  
 85 90 95

Glu Leu Asn Pro Ile Arg Ser Lys Ile Val Arg Ala Phe Phe Asp Asn  
 100 105 110

Arg Asn Leu Arg Lys Gly Pro Ser Gly Leu Ala Asp Glu Ile Asn Phe  
 115 120 125

## 5345

Glu Asp Phe Leu Thr Ile Met Ser Tyr Phe Arg Pro Ile Asp Thr Thr  
 130 135 140  
 Met Asp Glu Glu Gln Val Glu Leu Ser Arg Lys Glu Lys Leu Arg Phe  
 145 150 155 160  
 Leu Phe His Met Tyr Asp Ser Asp Ser Asp Gly Arg Ile Thr Leu Glu  
 165 170 175  
 Glu Tyr Arg Asn Val Val Glu Glu Leu Leu Ser Gly Asn Pro His Ile  
 180 185 190  
 Glu Lys Glu Ser Ala Arg Ser Ile Ala Asp Gly Ala Met Met Glu Ala  
 195 200 205  
 Ala Ser Val Cys Met Gly Gln Met Glu Pro Asp Gln Val Tyr Glu Gly  
 210 215 220  
 Ile Thr Phe Glu Asp Phe Leu Lys Ile Trp Gln Gly Ile Asp Ile Glu  
 225 230 235 240  
 Thr Lys Met His Val Arg Phe Leu Asn Met Glu Thr Met Ala Leu Cys  
 245 250 255

His

&lt;210&gt; 6119

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6119

Leu Ser Ser Gly Ala Glu Gly Asp Pro Gly Ser Leu Thr Gly Arg Ala  
 1 5 10 15  
 Phe Phe Phe Thr Thr Thr Trp Ala Glu Val Arg Glu Phe Cys His Thr  
 20 25 30  
 Gly Gly Arg Val Thr His Gln Gly Gly Met Trp Leu Gln Gln Ala Lys  
 35 40 45  
 Gly His Arg Lys Gly Gly Ala Gly Asp Ser Arg Val Ala Ala Thr Leu  
 50 55 60  
 Val Gly Trp Gly Gly Ala Gly Gly Arg Ser Asn Arg Asp Gly Val Gly  
 65 70 75 80

## 5346

Leu Lys Lys Ser Phe Phe Phe Ser Phe Phe Lys Gln Lys Lys  
                                     85                                    90

<210> 6120

<211> 120

<212> PRT

<213> Homo sapiens

<400> 6120

Arg Tyr Phe Leu Lys Met Ala Lys Ile Leu Thr Thr Pro Lys Phe Ala  
     1                                    5                                    10                                    15

His Ala Phe Arg Asn Leu Thr Phe Glu Gly Tyr Asp Gly Pro Val Thr  
                                     20                                    25                                    30

Leu Asp Asp Trp Gly Asp Val Asp Ser Thr Met Val Leu Leu Tyr Thr  
                                     35                                    40                                    45

Ser Val Asp Thr Lys Lys Tyr Lys Val Leu Leu Thr Tyr Asp Thr His  
                                     50                                    55                                    60

Val Asn Lys Thr Tyr Pro Val Asp Met Ser Pro Thr Phe Thr Trp Lys  
     65                                    70                                    75                                    80

Asn Ser Lys Leu Pro Asn Asp Ile Thr Gly Arg Gly Pro Gln Ile Leu  
                                     85                                    90                                    95

Met Ile Ala Val Phe Thr Leu Thr Gly Ala Val Val Leu Ser Cys Arg  
                                     100                                    105                                    110

Arg Ser Pro Asp Ala Gln Lys Ile  
                                     115                                    120

<210> 6121

<211> 72

<212> PRT

<213> Homo sapiens

<400> 6121

Arg Pro Glu Gly Ala Gln Leu Cys Pro Gln Gly Lys Leu Lys Ser Pro  
     1                                    5                                    10                                    15

Ala Leu Ser Ala Leu Gly Pro Cys Arg Ala Val Arg Val Glu Leu Pro  
                                     20                                    25                                    30

Pro Gln Thr Leu Arg Ser His Ala Val His Ser Ser Ser Trp Ile Ser  
                                     35                                    40                                    45

## 5347

Leu Arg Thr Phe Val Leu Ala Tyr Leu Asn Asp Leu Ser Thr Glu Thr  
50 55 60

Pro Gly Cys Leu Pro Leu Pro Leu  
65 70

<210> 6122

<211> 34

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (3)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6122

Val Leu Xaa Ser Ile Pro Phe Ile Ile Ser Tyr Val Ile Ser Leu Ser  
1 5 10 15

Phe Leu Val Gly Ser Lys Thr His Xaa Gln Phe Ser Gln Ser Ser Met  
20 25 30

Asp Ile

<210> 6123

<211> 69

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (19)

<223> Xaa equals any of the naturally occurring L-amino acids



5348

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (30)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6123

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Phe | Pro | Gln | Pro | Pro | Xaa | His | Gly | Trp | Val | Gly | Glu | Ala | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asn | Xaa | Leu | Arg | Gln | Glu | Val | Ala | Ala | Ala | Gln | Val | Xaa | Leu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Glu | Pro | Thr | Glu | Val | Arg | Ser | Gly | Arg | Trp | Thr | Cys | Pro | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Val | Pro | Asp | Ser | Gly | Ser | Cys | Cys | His | Trp | Ile | Ser | Trp | His | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Arg | Gln | Lys | Glu | Arg |
| 65  |     |     |     |     |

&lt;210&gt; 6124

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (73)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (80)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6124

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Ala | Pro | Pro | Ser | Pro | Ala | Ala | Ala | Arg | Glu | Ser | Thr | Arg | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | Ile | Asn | Val | Arg | Ala | Ser | Ile | Ala | Leu | Ser | Ser | Ser | Leu | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Val | Leu | Pro | Arg | Leu | Thr | Pro | Thr | Ser | Pro | Gly | Pro | Arg | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Gly | Asn | Leu | Ala | Val | Pro | Arg | Leu | Ser | Asn | Lys | Ala | Val | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

## 5349

Asn Ser Lys Lys Lys Lys Lys Lys Xaa Ser Phe Phe Phe Phe Phe Xaa  
 65 70 75 80

<210> 6125

<211> 92

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6125

Ser Ser Ser Xaa Lys Xaa Asp Xaa Arg Ile Gly Lys Ala Gly Thr Pro  
 1 5 10 15

Ala Gly Thr Gly Pro Glu Phe Pro Gly Arg Pro Thr Arg Pro Gly Glu  
 20 25 30

Val Leu Phe Ser Thr Cys Gly Val Ser His Trp Lys His Asn Pro Ile  
 35 40 45

Val Pro Glu Gly Phe Ser Pro Gln Trp Leu Ser His Pro Lys Arg Lys  
 50 55 60

Ser Leu Ser Phe Leu Thr Leu Leu Phe Cys His Leu Leu Pro Leu Asp  
 65 70 75 80

Asn Gln Gly Gln Gly Ala Thr Trp Lys Cys Leu Thr  
 85 90

<210> 6126

<211> 105

## 5350

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6126

Asp Glu Glu Ala Lys Asp Glu Lys Ala Glu Pro Asn Arg Asp Lys Ser  
 1 5 10 15

Val Gly Pro Leu Pro Gln Ala Asp Pro Glu Val Ser Asp Ile Glu Ser  
 20 25 30

Arg Ile Ala Ala Leu Arg Ala Ala Gly Leu Thr Val Lys Pro Ser Gly  
 35 40 45

Lys Pro Arg Arg Lys Ser Asn Leu Pro Ala Leu Tyr Glu Gly Thr Leu  
 50 55 60

Ser Leu Cys Ser Glu Asp Leu Lys His Thr His Pro Asp Ser Val Lys  
 65 70 75 80

Ser Lys Arg Ser Arg Leu Asn His Val Ala Ser Cys Gly Asn Leu Ser  
 85 90 95

Pro Pro Pro Arg Glu Asp Gly Cys Asp  
 100 105

&lt;210&gt; 6127

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6127

Thr Pro Glu Leu Lys Arg Ser Phe His Leu Ile Leu Gln Ser Ser Trp  
 1 5 10 15

Asp Tyr Ser Arg Val Ser Thr Cys Leu Ala Asn Phe Ser Phe Leu Ile  
 20 25 30

Phe Leu Glu Leu Gly Ser His Tyr Val Ala  
 35 40

&lt;210&gt; 6128

&lt;211&gt; 176

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

## 5351

&lt;222&gt; (151)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (154)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (170)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6128

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Ala | Val | Gln | Pro | Leu | Gly | Leu | Pro | Ser | Pro | Ser | Thr | Ser | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Ala | Ser | Gln | Ala | Ile | Ala | Met | Val | Phe | Val | Arg | Arg | Pro | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Leu | Thr | Thr | Val | Leu | Leu | Ala | Leu | Leu | Val | Cys | Leu | Gly | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Asp | Ala | Tyr | Pro | Ile | Lys | Pro | Glu | Ala | Pro | Gly | Glu | Asp | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Glu | Glu | Leu | Asn | Arg | Tyr | Tyr | Ala | Ser | Leu | Arg | His | Tyr | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Val | Thr | Arg | Gln | Arg | Tyr | Gly | Lys | Arg | Asp | Gly | Pro | Asp | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Ser | Lys | Thr | Phe | Phe | Pro | Asp | Gly | Glu | Asp | Arg | Pro | Val | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Lys | Ser | Ala | Arg | Tyr | His | Thr | Ser | Cys | Ile | Arg | Glu | Arg | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ala | Leu | Pro | Trp | Gln | His | His | Leu | Thr | Thr | Ser | Pro | Arg | Leu | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Asp | Pro | Ile | Leu | Xaa | Phe | Val | Xaa | Gln | Ser | Glu | Gly | Gln | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Val | Arg | Thr | Leu | Arg | Leu | Trp | Glu | Xaa | Ala | Asn | Ser | Gln | Ser | Phe |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

## 5352

&lt;210&gt; 6129

&lt;211&gt; 205

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6129

Lys Val His Ser Ser Glu Ala Gly Leu Thr Ser Arg Phe Leu Ile Ala  
 1 5 10 15

Trp Asp Val His Arg Ala Asn Val Leu Glu Gly Gly Asp Pro Thr Phe  
 20 25 30

Pro Gln Leu Thr Ala Ser Pro His Ser Met Asp Ser Met Leu Pro Ser  
 35 40 45

Gly Glu Gly Gly Pro Lys Arg Thr His Pro Thr Val Pro Gly Ile Pro  
 50 55 60

Gly Gly Thr Arg Ala Gly Ala Gly Lys Ile Gly Arg Met Ile Ala Glu  
 65 70 75 80

Glu Ile Met Glu Ile His Arg Ile Arg Gly Ser Ser Pro Ser Ser Cys  
 85 90 95

Gly Ser Ser Pro Leu Asn Ile Thr Ser Thr Pro Pro Pro Asp Ala Ser  
 100 105 110

Ser Pro Gly Gly Lys Lys Ile Leu Asn Gly Gly Thr Pro Asp Ile Pro  
 115 120 125

Ser Ser Gly Leu Leu Ser Gly Gln Ala Gln Glu Asn Pro Gly Tyr Pro  
 130 135 140

Tyr Ser Asp Ser Ser Ser Ile Leu Gly Glu Asn Pro His Ile Gly Ile  
 145 150 155 160

Asp Met Ile Asp Asn Asp Gln Gly Ser Ser Ser Pro Ser Asn Asp Glu  
 165 170 175

Ala Ala Met Ala Val Ile Met Ser Leu Leu Glu Ala Asp Ala Gly Leu  
 180 185 190

Gly Gly Pro Val Asp Phe Ser Asp Leu Pro Trp Pro Leu  
 195 200 205

&lt;210&gt; 6130

&lt;211&gt; 63

&lt;212&gt; PRT

## 5353

&lt;213&gt; Homo sapiens

&lt;400&gt; 6130

```

Pro Ala Lys Pro Gln Lys Gly Gln Glu Ser Gly Lys Leu Gln Arg Pro
 1             5             10             15

Lys Arg Gln Gln Leu Ile Val Ser Ser Glu Cys Cys Cys Gln Asn Lys
          20             25             30

Pro Thr Arg Ala Val Phe Ser Pro Cys Pro Asn Gln Ile Lys Val Gln
          35             40             45

Ile Pro Glu Lys Glu Pro Pro Trp Leu Gly Arg Thr Gln Ala His
 50             55             60

```

&lt;210&gt; 6131

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (82)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6131

```

Xaa Thr Val Ser Arg Val Arg Ala Leu Tyr Lys Arg Val Leu Gln Leu
 1             5             10             15

His Arg Val Leu Pro Pro Asp Leu Lys Ser Leu Gly Asp Gln Tyr Val
          20             25             30

Lys Asp Glu Phe Arg Arg His Lys Thr Val Gly Ser Asp Glu Ala Gln
          35             40             45

Arg Phe Leu Gln Glu Trp Glu Gly Phe Lys Cys Leu Lys Ser Gly Arg
          50             55             60

Glu Lys Glu Thr Val Phe Lys Glu Phe Lys Ile Leu Lys Trp Lys Arg
 65             70             75             80

Pro Xaa Arg

```

## 5354

<210> 6132  
 <211> 53  
 <212> PRT  
 <213> Homo sapiens

<400> 6132  
 Val Gly Leu Glu Ile Asn Met Leu Ala Phe Ile Pro Val Leu Thr Lys  
     1                    5                    10                    15  
 Lys Ile Asn Pro Arg Ser Thr Glu Ala Ala Ile Lys Tyr Phe Leu Thr  
                     20                    25                    30  
 Gln Ala Thr Ala Ser Ile Ile Leu Leu Ile Ala Ile Leu Phe Asn Asn  
                     35                    40                    45  
 Ile Leu Ser Gly Gln  
                     50

<210> 6133  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (44)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (48)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6133  
 Ala Gln Asp Gln Asn Ser Lys Cys Ile Gly Thr Asp Leu Asn Arg Asn  
     1                    5                    10                    15  
 Phe Asn Ala Ser Trp Asn Ser Ile Pro Asn Thr Asn Asp Pro Cys Ala  
                     20                    25                    30  
 Asp Asn Tyr Arg Gly Ser Ala Pro Glu Ser Glu Xaa Glu Thr Lys Xaa  
                     35                    40                    45  
 Val Thr Asn Phe Ile Arg Ser His Leu Asn Glu Ile Lys Val Tyr Ile  
                     50                    55                    60  
 Thr Phe His Ser Tyr Ser Gln Met Leu Leu Phe Pro Tyr Gly Tyr Thr

## 5355

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Ser | Lys | Leu | Pro | Pro | Asn | His | Glu | Asp | Leu | Ala | Lys | Val | Ala | Lys | Ile |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Gly | Thr | Asp | Val | Leu | Ser | Thr | Arg | Tyr | Glu | Thr | Arg | Tyr | Ile | Tyr | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Ile | Glu | Ser | Thr | Ile | Tyr | Pro | Ile | Ser | Gly | Ser | Ser | Leu | Asp | Trp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ala | Tyr | Asp | Leu | Gly | Ile | Lys | His | Thr | Phe | Ala | Phe | Glu | Leu | Arg | Asp |
|     |     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |
| Lys | Gly | Lys | Phe | Gly | Phe | Leu | Leu | Pro | Glu | Ser | Arg | Ile | Lys | Pro | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Cys | Arg | Glu | Thr | Met | Leu | Ala | Val | Lys | Phe | Ile | Ala | Lys | Tyr | Ile | Leu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Lys | His | Thr | Ser |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 180 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 6134

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6134

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Leu | Phe | Ala | Val | Thr | Gln | Thr | Thr | Leu | His | Lys | Thr | Phe | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Lys | Trp | Tyr | Lys | Phe | Ile | Asn | Tyr | His | Phe | Ser | Leu | Thr | Val | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Asn | Thr | Thr | Leu | Gln | Lys | Ser | Ala | Phe |     |     |     |     |     |     |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |     |     |     |     |

&lt;210&gt; 6135

&lt;211&gt; 212

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6135

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Tyr | Leu | Gly | Ser | Ser | Thr | Ala | Ser | Asp | Phe | Leu | Ala | Val | Glu | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |



## 5356

Arg Arg Gly Arg Val Ala Phe Leu Trp Asp Leu Gly Ser Gly Ser Thr  
                   20                  25                  30

Arg Leu Glu Phe Pro Asp Phe Pro Ile Asp Asp Asn Arg Trp His Ser  
           35                  40                  45

Ile His Val Ala Arg Phe Gly Asn Ile Gly Ser Leu Ser Val Lys Glu  
       50                  55                  60

Met Ser Ser Asn Gln Lys Ser Pro Thr Lys Thr Ser Lys Ser Pro Gly  
   65                  70                  75                  80

Thr Ala Asn Val Leu Asp Val Asn Asn Ser Thr Leu Met Phe Val Gly  
                   85                  90                  95

Gly Leu Gly Gly Gln Ile Lys Lys Ser Pro Ala Val Lys Val Thr His  
           100                  105                  110

Phe Lys Gly Cys Leu Gly Glu Ala Phe Leu Asn Gly Lys Ser Ile Gly  
           115                  120                  125

Leu Trp Asn Tyr Ile Glu Arg Glu Gly Lys Cys Arg Gly Cys Phe Gly  
       130                  135                  140

Ser Ser Gln Asn Glu Asp Pro Ser Phe His Phe Asp Gly Ser Gly Tyr  
   145                  150                  155                  160

Ser Val Val Glu Lys Ser Leu Pro Ala Thr Val Thr Gln Ile Ile Met  
                   165                  170                  175

Leu Phe Asn Thr Phe Ser Pro Asn Gly Leu Leu Ser Leu Pro Gly Phe  
                   180                  185                  190

Ile Arg His Lys Arg Leu Phe Ile His Arg Ala Val Ser Trp Gln Ser  
           195                  200                  205

Glu Gly Tyr Asp  
       210

<210> 6136

<211> 75

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (22)

<223> Xaa equals any of the naturally occurring L-amino acids

## 5357

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (28)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (31)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6136

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ala | Ser | Pro | Pro | Ser | Glu | Lys | Lys | Ile | Leu | Arg | Gln | Ser | Met | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Cys | Pro | Ser | Xaa | His | Arg | Ser | Leu | Ser | Xaa | Thr | Gln | Xaa | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Gly | Val | Lys | Phe | Arg | Arg | His | Gly | Ala | Asp | Asn | His | Glu | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ala | Ala | Thr | Ala | Thr | Thr | Ala | Ala | Ala | Thr | Thr | Val | Ala | Ala | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Ala | Ala | Ala | Ala | Arg | Val | Thr | Leu | Thr |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |

&lt;210&gt; 6137

&lt;211&gt; 186

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (18)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6137

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Leu | Thr | Leu | Thr | Lys | Gly | Xaa | Lys | Ser | Trp | Glu | Leu | His | Arg | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Xaa | Arg | Ser | Arg | Thr | Ser | Gly | Ser | Pro | Gly | Leu | Gln | Glu | Phe | Gly |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Thr | Thr | Glu | Gly | Glu | Glu | Ile | Thr | Glu | Ser | Ser | Ser | Thr | Glu |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5358

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Glu Met Glu Val Arg Ser Val Val Ala Asp Thr Asp Gln Lys Ala Leu |     |     |
| 50  | 55  | 60  |
| Gly Ser Glu Val Gln Asp Ala Ser Lys Val Thr Thr Gln Ile Asp Lys |     |     |
| 65  | 70  | 75  |
| Glu Lys Lys Glu Ile Pro Val Ser Ile Lys Lys Glu Pro Glu Val Thr |     |     |
| 85  | 90  | 95  |
| Val Val Ser Gln Pro Thr Glu Pro Gln Pro Val Leu Ile Pro Ser Ile |     |     |
| 100   | 105 | 110 |
| Asn Ile Asn Ser Asp Ser Gly Glu Asn Lys Glu Glu Ile Gly Ser Leu |     |     |
| 115   | 120 | 125 |
| Ser Lys Thr Glu Thr Ile Leu Pro Pro Glu Ser Glu Asn Pro Lys Glu |     |     |
| 130   | 135 | 140 |
| Asn Asp Asn Asp Ser Gly Thr Gly Ser Thr Ala Asp Thr Ser Ser Ile |     |     |
| 145   | 150 | 155 |
| Asp Leu Asn Leu Ser Ile Ser Ser Phe Leu Ser Lys Thr Lys Asp Ser |     |     |
| 165   | 170 | 175 |
| Gly Ser Ile Ser Leu Gln Glu Thr Lys Lys                         |     |     |
| 180   | 185 |     |

&lt;210&gt; 6138

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

5359

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6138

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Xaa | Leu | Leu | Lys | Gly | Thr | Lys | Xaa | Gly | Ser | Ser | Thr | Ala | Val | Xaa |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ala | Leu | Glu | Leu | Val | Asp | Pro | Pro | Gly | Cys | Arg | Asn | Ser | Ala | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Ser | Gly | Pro | Glu | Pro | Glu | Ser | Glu | Ser | Glu | Ser | Glu | Ser | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Lys | Ser | Glu | Cys | Gln | Ser | Glu | Pro | Asp | Ser | Glu | Ser | Asp | Ala | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asp | Ser | Glu | Phe | Glu | Pro | Glu | Gly | Glu | Pro | Gly | Lys | Pro | Glu | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Arg | Gln | Gly | Ala | Glu |
|     |     |     |     | 85  |     |     |

&lt;210&gt; 6139

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (39)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (73)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6139

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Phe | Gly | Gln | Ala | Arg | Xaa | Ala | Ala | Glu | Ala | Ile | Ser | Leu | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Arg | Ser | Cys | Pro | Glu | Pro | Ala | Thr | Ala | Leu | Ser | Gln | Pro | Ala |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5360

20 25 30  
 Ser Phe Ser Val Leu Pro Xaa Pro Arg Leu Pro Arg Arg Gly Tyr Pro  
 35 40 45  
 Gln Pro Gln Pro Gly Ala Gly Glu Ala Ala Lys Gly Glu Gly Arg Asn  
 50 55 60  
 Gln Gly Met Ser Ala Gly Arg Ala Xaa Gly Ala Leu Ser Arg Thr Arg  
 65 70 75 80  
 Thr Ala Leu Gly Ala Gly  
 85

&lt;210&gt; 6140

&lt;211&gt; 594

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6140

Arg Gln Ile Phe Gln Ser Leu Pro Pro Phe Met Asp Ile Leu Leu Leu  
 1 5 10 15  
 Leu Leu Phe Phe Met Ile Ile Phe Ala Ile Leu Gly Phe Tyr Leu Phe  
 20 25 30  
 Ser Pro Asn Pro Ser Asp Pro Tyr Phe Ser Thr Leu Glu Asn Ser Ile  
 35 40 45  
 Val Ser Leu Phe Val Leu Leu Thr Thr Ala Asn Phe Pro Asp Val Met  
 50 55 60  
 Met Pro Ser Tyr Ser Arg Asn Pro Trp Ser Cys Val Phe Phe Ile Val  
 65 70 75 80  
 Tyr Leu Ser Ile Glu Leu Tyr Phe Ile Met Asn Leu Leu Leu Ala Val  
 85 90 95  
 Val Phe Asp Thr Phe Asn Asp Ile Glu Lys Arg Lys Phe Lys Ser Leu  
 100 105 110  
 Leu Leu His Lys Arg Thr Ala Ile Gln His Ala Tyr Arg Leu Leu Ile  
 115 120 125  
 Ser Gln Arg Arg Pro Ala Gly Ile Ser Tyr Arg Gln Phe Glu Gly Leu  
 130 135 140  
 Met Arg Phe Tyr Lys Pro Arg Met Ser Ala Arg Glu Arg Tyr Leu Thr  
 145 150 155 160

## 5361

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Lys | Ala | Leu | Asn | Gln | Asn | Asn | Thr | Pro | Leu | Leu | Ser | Leu | Lys | Asp | 165 | 170 | 175 |     |
| Phe | Tyr | Asp | Ile | Tyr | Glu | Val | Ala | Ala | Leu | Lys | Trp | Lys | Ala | Lys | Lys | 180 | 185 | 190 |     |
| Asn | Arg | Glu | His | Trp | Phe | Asp | Glu | Leu | Pro | Arg | Thr | Ala | Leu | Leu | Ile | 195 | 200 | 205 |     |
| Phe | Lys | Gly | Ile | Asn | Ile | Leu | Val | Lys | Ser | Lys | Ala | Phe | Gln | Tyr | Phe | 210 | 215 | 220 |     |
| Met | Tyr | Leu | Val | Val | Ala | Val | Asn | Gly | Val | Trp | Ile | Leu | Val | Glu | Thr | 225 | 230 | 235 | 240 |
| Phe | Met | Leu | Lys | Gly | Gly | Asn | Phe | Phe | Ser | Lys | His | Val | Pro | Trp | Ser | 245 | 250 | 255 |     |
| Tyr | Leu | Val | Phe | Leu | Thr | Ile | Tyr | Gly | Val | Glu | Leu | Phe | Leu | Lys | Val | 260 | 265 | 270 |     |
| Ala | Gly | Leu | Gly | Pro | Val | Glu | Tyr | Leu | Ser | Ser | Gly | Trp | Asn | Leu | Phe | 275 | 280 | 285 |     |
| Asp | Phe | Ser | Val | Thr | Val | Phe | Ala | Phe | Leu | Gly | Leu | Leu | Ala | Leu | Ala | 290 | 295 | 300 |     |
| Leu | Asn | Met | Glu | Pro | Phe | Tyr | Phe | Ile | Val | Val | Leu | Arg | Pro | Leu | Gln | 305 | 310 | 315 | 320 |
| Leu | Leu | Arg | Leu | Phe | Lys | Leu | Lys | Glu | Arg | Tyr | Arg | Asn | Val | Leu | Asp | 325 | 330 | 335 |     |
| Thr | Met | Phe | Glu | Leu | Leu | Pro | Arg | Met | Ala | Ser | Leu | Gly | Leu | Thr | Leu | 340 | 345 | 350 |     |
| Leu | Ile | Phe | Tyr | Tyr | Ser | Phe | Ala | Ile | Val | Gly | Met | Glu | Phe | Phe | Cys | 355 | 360 | 365 |     |
| Gly | Ile | Val | Phe | Pro | Asn | Cys | Cys | Asn | Thr | Ser | Thr | Val | Ala | Asp | Ala | 370 | 375 | 380 |     |
| Tyr | Arg | Trp | Arg | Asn | His | Thr | Val | Gly | Asn | Arg | Thr | Val | Val | Glu | Glu | 385 | 390 | 395 | 400 |
| Gly | Tyr | Tyr | Tyr | Leu | Asn | Asn | Phe | Asp | Asn | Ile | Leu | Asn | Ser | Phe | Val | 405 | 410 | 415 |     |
| Thr | Leu | Phe | Glu | Leu | Thr | Val | Val | Asn | Asn | Trp | Tyr | Ile | Ile | Met | Glu | 420 | 425 | 430 |     |

## 5362

Gly Val Thr Ser Gln Thr Ser His Trp Ser Arg Leu Tyr Phe Met Thr  
 435 440 445

Phe Tyr Ile Val Thr Met Val Val Met Thr Ile Ile Val Ala Phe Ile  
 450 455 460

Leu Glu Ala Phe Val Phe Arg Met Asn Tyr Ser Arg Lys Asn Gln Asp  
 465 470 475 480

Ser Glu Val Asp Gly Gly Ile Thr Leu Glu Lys Glu Ile Ser Lys Glu  
 485 490 495

Glu Leu Val Ala Val Leu Glu Leu Tyr Arg Glu Ala Arg Gly Ala Ser  
 500 505 510

Ser Asp Val Thr Arg Leu Leu Glu Thr Leu Ser Gln Met Glu Arg Tyr  
 515 520 525

Gln Gln His Ser Met Val Phe Leu Gly Arg Arg Ser Arg Thr Lys Ser  
 530 535 540

Asp Leu Ser Leu Lys Met Tyr Gln Glu Glu Ile Gln Glu Trp Tyr Glu  
 545 550 555 560

Glu His Ala Arg Glu Gln Glu Gln Gln Arg Gln Leu Ser Ser Ser Ala  
 565 570 575

Ala Pro Ala Ala Gln Gln Pro Pro Gly Ser Arg Gln Arg Ser Gln Thr  
 580 585 590

Val Thr

<210> 6141

<211> 377

<212> PRT

<213> Homo sapiens

<400> 6141

Leu Ala Glu Ala Thr Lys Lys Glu Ile Thr Phe Phe Gln Thr His Pro  
 1 5 10 15

Tyr Phe Arg Val Leu Leu Glu Glu Gly Ser Ala Thr Val Pro Arg Leu  
 20 25 30

Ala Glu Arg Leu Thr Thr Glu Leu Ile Met His Ile Gln Lys Ser Leu  
 35 40 45

## 5363

Pro Leu Leu Glu Gly Gln Ile Arg Glu Ser His Gln Lys Ala Thr Glu  
 50 55 60

Glu Leu Arg Arg Cys Gly Ala Asp Ile Pro Ser Gln Glu Ala Asp Lys  
 65 70 75 80

Met Phe Phe Leu Ile Glu Lys Ile Lys Met Phe Asn Gln Asp Ile Glu  
 85 90 95

Lys Leu Val Glu Gly Glu Glu Val Val Arg Glu Asn Glu Thr Arg Leu  
 100 105 110

Tyr Asn Lys Ile Arg Glu Asp Phe Lys Asn Trp Val Gly Ile Leu Ala  
 115 120 125

Thr Asn Thr Gln Lys Val Lys Asn Ile Ile His Glu Glu Val Glu Lys  
 130 135 140

Tyr Glu Lys Gln Tyr Arg Gly Lys Glu Leu Leu Gly Phe Val Asn Tyr  
 145 150 155 160

Lys Thr Phe Glu Ile Ile Val His Gln Tyr Ile Gln Gln Leu Val Glu  
 165 170 175

Pro Ala Leu Ser Met Leu Gln Lys Ala Met Glu Ile Ile Gln Gln Ala  
 180 185 190

Phe Ile Asn Val Ala Lys Lys His Phe Gly Glu Phe Phe Asn Leu Asn  
 195 200 205

Gln Thr Val Gln Ser Thr Ile Glu Asp Ile Lys Val Lys His Thr Ala  
 210 215 220

Lys Ala Glu Asn Met Ile Gln Leu Gln Phe Arg Met Glu Gln Met Val  
 225 230 235 240

Phe Cys Gln Asp Gln Ile Tyr Ser Val Val Leu Lys Lys Val Arg Glu  
 245 250 255

Glu Ile Phe Asn Pro Leu Gly Thr Pro Ser Gln Asn Met Lys Leu Asn  
 260 265 270

Ser His Phe Pro Ser Asn Glu Ser Ser Val Ser Ser Phe Thr Glu Ile  
 275 280 285

Gly Ile His Leu Asn Ala Tyr Phe Leu Glu Thr Ser Lys Arg Leu Ala  
 290 295 300

Asn Gln Ile Pro Phe Ile Ile Gln Tyr Phe Met Leu Arg Glu Asn Gly  
 305 310 315 320



## 5364

Asp Ser Leu Gln Lys Ala Met Met Gln Ile Leu Gln Glu Lys Asn Arg  
                   325                  330                  335

Tyr Ser Trp Leu Leu Gln Glu Gln Ser Glu Thr Ala Thr Lys Arg Arg  
                   340                  345                  350

Ile Leu Lys Glu Arg Ile Tyr Arg Leu Thr Gln Ala Arg His Ala Leu  
                   355                  360                  365

Cys Gln Phe Ser Ser Lys Glu Ile His  
                   370                  375

<210> 6142

<211> 87

<212> PRT

<213> Homo sapiens

<400> 6142

Gln Ile Lys Gly Glu Val Leu Ala Lys Ser Ile Cys Glu Asp Asp Thr  
       1                  5                  10                  15

Leu Gly Ile Ala Gly His Lys Thr Gly Lys Val Gly Lys Cys Ser Leu  
                   20                  25                  30

Asn Gly Ala Tyr Thr Leu Ser Tyr Arg Gln Trp Glu Ala Leu Gly Lys  
                   35                  40                  45

Asn Thr Val Ile Arg Lys Phe Cys Ile His Phe Ser Asn Gly Glu Lys  
                   50                  55                  60

Leu Gly Asn Ser Leu Leu Gly Gly Ser Leu Trp Ala Gly Ile Ser Gln  
       65                  70                  75                  80

Leu Ile Ser Gly Phe Ile Phe  
                   85

<210> 6143

<211> 43

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (18)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6143

## 5365

Ile Arg His Arg Leu Asp Leu Leu Leu Gly Val Arg Glu Lys Ser Val  
 1 5 10 15

Ser Xaa Leu Leu Val Leu Leu Pro Lys Cys Phe Tyr Lys Glu Met Thr  
 20 25 30

Gly Asp Ile Tyr Ser Pro Lys Glu Leu Ile Tyr  
 35 40

<210> 6144

<211> 76

<212> PRT

<213> Homo sapiens

<400> 6144

His Lys Arg Cys Leu Ile Phe Ile Gln Ala Ile Phe Ala His Ile His  
 1 5 10 15

Gln Asn Gly Met Thr Gln Gly Lys Asn His Phe Ala Lys Gly Asn Lys  
 20 25 30

Thr Ser Cys Arg Gln Leu Asp Thr Phe Arg Leu Phe Arg Lys Val Cys  
 35 40 45

Thr Gly Thr Leu Ile Gly Ile Leu Leu Val Tyr Leu Leu Ser Tyr Phe  
 50 55 60

Lys Val Val Ala Leu Ile Ile Val Val Ser Val Phe  
 65 70 75

<210> 6145

<211> 112

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (76)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6145

Trp Met Lys Met Arg Lys Thr Glu Pro Arg Glu Leu Leu Glu Thr Ser  
 1 5 10 15

Leu Arg Lys Lys Arg Arg Asp Gln Phe Asn Val Leu Ile Lys Glu Leu  
 20 25 30

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Met | Leu | Pro | Gly | Asn | Thr | Arg | Lys | Met | Asp | Lys | Thr | Thr | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Glu | Lys | Val | Ile | Gly | Phe | Leu | Gln | Lys | His | Asn | Glu | Val | Ser | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Thr | Glu | Ile | Cys | Asp | Ile | Gln | Gln | Asp | Trp | Xaa | Pro | Ser | Phe | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ser | Asn | Glu | Glu | Phe | Thr | Gln | Leu | Met | Leu | Glu | Ser | His | Phe | Arg | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Cys | Glu | Glu | Ser | Arg | Cys | His | Val | Leu | Val | Ala | Arg | Met | Phe | Pro | Phe |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

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<400> 6146
Ser Phe Thr Pro Ala Asn Thr Ser Ile Leu Leu Ile Asn Gly Asn Ile
   1                      5                      10                     15
Leu Met Cys His Phe Leu Ser Lys Gln Val Ser Tyr Thr Ala Pro Arg
      20                        25                       30
Gly Pro Arg Glu Ala Glu Ala Gln Thr Glu Gly Glu His Ser Leu Ala
      35                         40                       45
Gly Arg His Met Pro Gly Arg Met Thr Ile Gly Ile Ala Ser Ser Ile
      50                          55                       60
Asn Gln Leu Leu Lys Gly Phe Leu Ser Asp Ser
    65                            70                    75
```

<400> 6147  
Thr Leu Cys Val Gly Ser Trp Gln Ala Ala Met Ser Leu Gly Ile Ile  
1 5 10 15

5367

Glu Ile Ile Asp Asp Thr Glu His Ser Tyr Ala Leu Ser Leu Tyr Ser  
                   20                                  25                                  30

&lt;210&gt; 6148

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (8)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (15)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6148

Gln Asp Arg Lys Gly Asp Arg Xaa Arg Leu Tyr Leu Lys Lys Xaa Xaa  
   1                  5                                  10                                  15

Thr Ile Leu Phe Leu Ile Leu Phe Asn Ser Ser Phe Leu Phe Phe Ser  
                   20                                  25                                  30

Pro Trp Leu Leu Cys Ser Leu Ile Val Ile  
                   35                                  40

&lt;210&gt; 6149

&lt;211&gt; 74

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6149

Asp Phe Phe Phe Lys Arg Thr Phe Lys Ile Met Ile Ser Asn Phe Asn  
   1                  5                                  10                                  15

Cys Ile Tyr Arg Gly Phe Lys Glu Ser Leu Ile Ser Cys Thr Leu Leu

## 5368

20 25 30  
 Arg Leu Ser Tyr Ser Phe Ser His Pro Arg Thr Gly Leu Pro Leu Arg  
 35 40 45  
 Glu Ala Asp Pro Leu Gln Val Ala Ile Thr Val Val Ala Ser Ser Ala  
 50 55 60  
 Ser Arg Leu Leu Gln Ser Arg Val Pro Phe  
 65 70

<210> 6150  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

<400> 6150  
 Leu Thr Leu Tyr Asp Met Cys Lys Ala Val Ser Arg Asp Ile Val Leu  
 1 5 10 15  
 Glu Glu Ile Lys Leu Ile Ser Lys Thr Gly Gly Gln Arg Gly Asp Phe  
 20 25 30  
 His Arg Ala  
 35

<210> 6151  
 <211> 46  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (43)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6151  
 Leu Ser Thr Glu Cys Asp Arg Tyr Cys Ser Lys His Phe Ile Cys Asn  
 1 5 10 15  
 Asp Leu Leu Leu Gln Asn Thr Pro Met Ser Asn Val Leu Leu Ser Pro  
 20 25 30  
 Tyr Leu Gln Leu Arg Lys Leu Gly Thr Glu Xaa Leu Ser Asn  
 35 40 45

## 5369

&lt;210&gt; 6152

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6152

Ala Lys Ile Lys Gly Leu Gln Lys His Ser Phe Leu Cys Cys Ser Leu  
 1 5 10 15

Leu Gly Phe Met Gln Arg Gln Phe Cys Val Asn Val Gln Leu Thr Leu  
 20 25 30

Ile Trp Lys Tyr Glu Asn Gln Ser Ile Leu Val Ile Lys Asn Phe Phe  
 35 40 45

Thr Ile Val Ile Ile Leu Met Phe Ile Leu Cys Lys Ile Thr His Leu  
 50 55 60

Ile Lys  
 65

&lt;210&gt; 6153

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6153

Gly Val Leu Gly Gln Xaa Val Thr Xaa Tyr Phe Ser Gln Pro Leu Xaa  
 1 5 10 15

Cys Asp Trp Arg Thr Leu Leu Phe Ser His Val Phe Leu Ile Met Pro  
 20 25 30

## 5370

Glu Ser Pro Thr Pro Leu Leu Gly Arg Asp Ile Leu Gly Lys Ala Gly  
                   35                  40                  45

Ala Val Ile His  
                   50

<210> 6154

<211> 83

<212> PRT

<213> Homo sapiens

<400> 6154

Ser Val Trp Gly Ser Val Ser Phe Pro Gly Ser Trp His Ser Ser Gly  
       1                  5                  10                  15

Pro Leu Ser Leu Pro Leu Leu Gly Glu Gly Gly Lys Arg Glu Ile Pro  
                   20                  25                  30

Ser Ser Gln Pro Glu Arg Ala Glu Ala Asp Arg Ser Pro Leu Ala Leu  
                   35                  40                  45

Cys Ala Cys Val Arg Ala Ser Val Ser Leu Leu Val Gly Arg Ser Asp  
       50                  55                  60

Val Val Gly Gly Lys Pro Gly Met Tyr Pro Phe Gln Thr Lys Leu Asn  
       65                  70                  75                  80

Ile Leu Lys

<210> 6155

<211> 96

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (30)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (69)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6155

Glu Asn Ala Leu Gln Thr Phe Leu His Pro Thr Pro Pro Asn Ser Glu

## 5371

|   |    |    |    |
|---|----|----|----|
| 1   | 5  | 10 | 15 |
| Ala Cys Trp Asp Pro Ser Ser Pro Ile Gly Ser Pro Gly Xaa Pro Ser | 20 | 25 | 30 |
| Val Phe Thr Gln Ser Arg Pro Phe Phe Arg Ser Phe Pro Val Arg Gly | 35 | 40 | 45 |
| Arg Tyr Thr Trp Thr Arg Ile Tyr Pro His Leu Thr Thr Leu Lys Ser | 50 | 55 | 60 |
| Cys Phe Leu Pro Xaa Ile His Ile Leu Ser Ser Cys His Leu Pro Ile | 65 | 70 | 75 |
| Gln Leu His Ile Cys Leu Ile Ala Leu Phe Phe Ser Val His Leu Ser | 85 | 90 | 95 |

&lt;210&gt; 6156

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6156

|   |    |    |    |    |
|---|----|----|----|----|
| Leu Ala Ile Ser Phe Thr Lys Met Ser Ser Ala Ala Glu Asn Gly Glu | 1  | 5  | 10 | 15 |
| Ala Ala Pro Gly Lys Gln Asn Glu Glu Lys Thr Tyr Lys Lys Thr Ala | 20 | 25 | 30 |    |
| Ser Ser Ala Ile Lys Gly Ala Ile Gln Leu Gly Ile Gly Tyr Thr Val | 35 | 40 | 45 |    |
| Gly Asn Leu Thr Ser Lys Pro Glu Pro Arg Cys Ser Tyr Ala Arg Leu | 50 | 55 | 60 |    |
| Leu Cys Gly Gly Lys Cys Val Pro Thr Gln Arg Arg Glu Ala Ile Leu | 65 | 70 | 75 | 80 |
| Thr Pro Ala His His Tyr Pro Arg Leu                             | 85 |    |    |    |

&lt;210&gt; 6157

&lt;211&gt; 36

&lt;212&gt; PRT



## 5372

&lt;213&gt; Homo sapiens

&lt;400&gt; 6157

Thr Ala Cys Lys Ile Leu Tyr Met Arg Cys Cys Arg Tyr Arg Asn Glu  
 1 5 10 15

Phe Ser Val His Val Trp Leu Ile Phe Phe Val His Asp Phe Cys Met  
 20 25 30

Phe Pro Phe Gln  
 35

&lt;210&gt; 6158

&lt;211&gt; 387

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (9)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6158

Pro Ala Gln Arg Pro Pro Pro Ala Xaa Gly Ala Ser Arg Gly Pro Gly  
 1 5 10 15

Gln Thr Arg Cys Glu Met Glu Lys Tyr Leu Thr Pro Gln Leu Pro Pro  
 20 25 30

Val Pro Ile Ile Pro Glu His Lys Lys Tyr Arg Arg Asp Ser Ala Ser  
 35 40 45

Val Val Asp Gln Phe Phe Thr Asp Thr Glu Gly Leu Pro Tyr Ser Ile  
 50 55 60

Asn Met Asn Val Phe Leu Pro Asp Ile Thr His Leu Arg Thr Gly Leu  
 65 70 75 80

Tyr Lys Ser Gln Arg Pro Cys Val Thr His Ile Lys Thr Glu Pro Val  
 85 90 95

Ala Ile Phe Ser His Gln Ser Glu Thr Thr Ala Pro Pro Pro Ala Pro  
 100 105 110

Thr Gln Ala Leu Pro Glu Phe Thr Ser Ile Phe Ser Ser His Gln Thr  
 115 120 125

Ala Ala Pro Glu Val Asn Asn Ile Phe Ile Lys Gln Glu Leu Pro Thr  
 130 135 140

## 5373

Pro Asp Leu His Leu Ser Val Pro Thr Gln Gln Gly His Leu Tyr Gln  
 145 150 155 160

Leu Leu Asn Thr Pro Asp Leu Asp Met Pro Ser Ser Thr Asn Gln Thr  
 165 170 175

Ala Ala Met Asp Thr Leu Asn Val Ser Met Ser Ala Ala Met Ala Gly  
 180 185 190

Leu Asn Thr His Thr Ser Ala Val Pro Gln Thr Ala Val Lys Gln Phe  
 195 200 205

Gln Gly Met Pro Pro Cys Thr Tyr Thr Met Pro Ser Gln Phe Leu Pro  
 210 215 220

Gln Gln Ala Thr Tyr Phe Pro Pro Ser Pro Pro Ser Ser Glu Pro Gly  
 225 230 235 240

Ser Pro Asp Arg Gln Ala Glu Met Leu Gln Asn Leu Thr Pro Pro Pro  
 245 250 255

Ser Tyr Ala Ala Thr Ile Ala Ser Lys Leu Ala Ile His Asn Pro Asn  
 260 265 270

Leu Pro Thr Thr Leu Pro Val Asn Ser Gln Asn Ile Gln Pro Val Arg  
 275 280 285

Tyr Asn Arg Arg Ser Asn Pro Asp Leu Glu Lys Arg Arg Ile His Tyr  
 290 295 300

Cys Asp Tyr Pro Gly Cys Thr Lys Val Tyr Thr Lys Ser Ser His Leu  
 305 310 315 320

Lys Ala His Leu Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Thr  
 325 330 335

Trp Glu Gly Cys Asp Trp Arg Phe Ala Arg Ser Asp Glu Leu Thr Arg  
 340 345 350

His Tyr Arg Lys His Thr Gly Ala Lys Pro Phe Gln Cys Gly Val Cys  
 355 360 365

Asn Arg Ser Phe Ser Arg Ser Asp His Leu Ala Leu His Met Lys Arg  
 370 375 380

His Gln Asn  
 385

## 5374

&lt;210&gt; 6159

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6159

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gly | Asn | Ser | Gln | Ser | Xaa | Phe | Thr | His | His | Leu | Pro | Val | Asn | Ser |
| 1   |     |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asn | Xaa | Gln | Pro | Val | Arg | Tyr | Asn | Arg | Arg | Ser | Asn | Pro | Asp | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Arg | Arg | Ile | His | Tyr | Cys | Asp | Tyr | Pro | Gly | Cys | Thr | Lys | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Thr | Lys | Ser | Ser | His | Leu | Lys | Ala | His | Leu | Arg | Thr | His | Thr | Gly |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Ile | Ser | Thr | Arg | Leu | Phe | Cys | Phe | Asn | Leu | Gln | Lys | Glu | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

Val

&lt;210&gt; 6160

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6160

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Pro | Pro | Leu | Leu | Ile | Met | Leu | Val | Ile | Tyr | Ile | Lys | Ile | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Ala | Cys | Arg | Gln | Leu | Gln | Arg | Thr | Glu | Leu | Met | Asp | His | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | Thr | Leu | Gln | Arg | Glu | Ile | His | Ala | Ala | Lys | Ser | Leu | Ala | Met |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

## 5375

Ile Val Gly Ile Phe Ala Leu Cys Trp Leu Pro Val His Ala Val Asn  
 50 55 60  
 Cys Val Thr Leu Phe Gln Pro Ala Gln Gly Lys Asn Lys Pro Lys Trp  
 65 70 75 80  
 Ala Met Asn Met Ala Ile Leu Leu Ser His Ala Asn Ser Val Val Asn  
 85 90 95  
 Pro Ile Val Tyr Ala Tyr Arg Asn Arg Asp Phe Arg Tyr Thr Phe His  
 100 105 110  
 Lys Ile Ile Ser Arg Tyr Leu Leu Cys Gln Ala Asp Val Lys Ser Gly  
 115 120 125  
 Asn Gly Gln Ala Gly Val Gln Pro Ala Leu Gly Val Gly Leu  
 130 135 140

&lt;210&gt; 6161

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6161

Lys Ser Ile Glu Gln Lys Gly Met His Ala Val Phe Gln Trp Leu Arg  
 1 5 10 15  
 His Ala Phe Tyr Ser Leu Thr Ser Ile His Phe Phe Thr Thr Cys Ile  
 20 25 30  
 Lys Thr Asn Asp Leu Cys Phe Cys His Arg Gln Lys Gln Val Asp Thr  
 35 40 45  
 Gly Gly Leu Ala Leu Leu Ile Asn Phe Phe Ser Ile Arg Phe Ser Leu  
 50 55 60  
 Ile Met Leu Asn Phe  
 65

&lt;210&gt; 6162

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6162

Phe Ser Lys His Asn Leu Ile Pro Asn Arg Phe Pro Leu Asn Gly Leu  
 1 5 10 15

## 5376

Arg Cys Val Arg Thr Trp Ala Arg Ala Gly Arg Thr Ile Leu Ile Pro  
                   20                                  25                                  30  
 Leu Phe Pro Ala Tyr His Leu Cys Ser Pro Phe Ser Ser Leu Pro Phe  
                   35                                  40                                  45  
 Asn Cys Leu Leu Cys Phe Val Ser Tyr His Cys Cys Trp Cys Leu Glu  
                   50                                  55                                  60  
 Pro Ala Ser Ser Thr Trp Gln Thr Ser Arg Pro Cys Gly Gln Arg Leu  
                   65                                  70                                  75                                  80  
 Gly Leu His Ile Tyr Ile Ser Gln Met Ile Trp Val Asp Gly Asp Arg  
                                   85                                  90                                  95

<210> 6163  
 <211> 53  
 <212> PRT  
 <213> Homo sapiens

<400> 6163  
 Ile Leu Cys Thr Arg Ile Pro Gly Arg Val Phe Tyr Pro Trp Lys Gln  
   1                                  5                                  10                                  15  
 Val Ser Asp Tyr Phe Val Phe Thr Val Arg Val Ser Ser Leu Glu Met  
                   20                                  25                                  30  
 Leu Thr Leu Lys Ser Val Phe Phe Ser Leu Tyr Leu Lys Ile Val Asn  
                   35                                  40                                  45  
 Ile Leu Ile Ser Ser  
                   50

<210> 6164  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 6164  
 Ile Arg His Glu Gly Ala Gly Pro Ser Gln Leu Arg Leu His Tyr Pro  
   1                                  5                                  10                                  15  
 Arg Ile Ser Met Ala Val Arg Gln Trp Val Ile Ala Leu Ala Leu Ala

## 5377

|   |     |    |
|---|-----|----|
| 20  | 25  | 30 |
| Ala Leu Leu Val Val Asp Arg Glu Val Pro Val Ala Ala Gly Lys Leu |     |    |
| 35  | 40  | 45 |
| Pro Phe Ser Arg Met Pro Ile Cys Glu His Met Val Glu Ser Pro Thr |     |    |
| 50  | 55  | 60 |
| Cys Ser Gln Met Ser Asn Leu Val Cys Gly Thr Asp Gly Leu Thr Tyr |     |    |
| 65  | 70  | 75 |
| Thr Asn Glu Cys Gln Leu Cys Leu Ala Arg Ile Lys Thr Lys Gln Asp |     |    |
| 85  | 90  | 95 |
| Ile Gln Ile Met Lys Asp Gly Lys Cys                             |     |    |
| 100   | 105 |    |

<210> 6165  
 <211> 69  
 <212> PRT  
 <213> Homo sapiens

<400> 6165  
 His Arg Leu Asp Phe Leu Gln Leu Met Ile Asp Ser Gln Asn Ser Lys  
 1 5 10 15  
 Glu Thr Glu Ser His Lys Ala Leu Ser Asp Leu Glu Leu Ala Ala Gln  
 20 25 30  
 Ser Ile Ile Phe Ile Phe Ala Gly Tyr Glu Thr Thr Ser Ser Val Leu  
 35 40 45  
 Ser Phe Thr Leu Tyr Glu Leu Ala Thr His Pro Asp Val Gln Gln Lys  
 50 55 60  
 Leu Gln Lys Gly Asp  
 65

<210> 6166  
 <211> 79  
 <212> PRT  
 <213> Homo sapiens

<400> 6166  
 His Arg Leu Asp Phe Leu Gln Leu Met Ile Asp Ser Gln Asn Ser Lys  
 1 5 10 15

## 5378

Glu Thr Glu Ser His Lys Ala Leu Ser Asp Leu Glu Leu Ala Ala Gln  
                   20                                  25                                  30  
 Ser Ile Ile Phe Ile Phe Ala Gly Tyr Glu Thr Thr Ser Ser Val Leu  
                   35                                  40                                  45  
 Ser Phe Thr Leu Tyr Glu Leu Ala Thr His Pro Asp Val Gln Gln Lys  
                   50                                  55                                  60  
 Leu Gln Lys Glu Ile Asp Ala Val Leu Pro Asn Lys Val Arg Gly  
                   65                                  70                                  75

&lt;210&gt; 6167

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (115)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6167

Xaa Glu His Pro Ser Thr Ala Pro Gly Lys Met Ser Thr Glu Gly Gly  
           1                                  5                                  10                                  15

Gly Arg Arg Cys Gln Ala Gln Val Ser Arg Arg Ile Ser Phe Ser Ala  
                   20                                  25                                  30

Ser His Arg Leu Tyr Ser Lys Phe Leu Ser Asp Glu Glu Asn Leu Lys  
                   35                                  40                                  45

Leu Phe Gly Lys Cys Asn Asn Pro Asn Gly His Gly His Asn Tyr Lys  
                   50                                  55                                  60

Val Val Val Thr Val His Gly Glu Ile Asp Pro Ala Thr Gly Met Val  
                   65                                  70                                  75                                  80

Met Asn Leu Ala Asp Leu Lys Lys Tyr Met Glu Glu Ala Ile Met Gln  
                   85                                  90                                  95

Pro Leu Asp His Lys Asn Leu Asp Met Asp Val Pro Tyr Phe Ala Asp  
                   100                                  105                                  110

## 5379

Val Val Xaa Leu Pro Gly Leu  
115

<210> 6168

<211> 192

<212> PRT

<213> Homo sapiens

<400> 6168

Pro Glu Gln Arg Gly Ser Ser Met Ala His Gly Pro Gly Ala Leu Met  
1 5 10 15

Leu Lys Cys Val Val Val Gly Asp Gly Ala Val Gly Lys Thr Cys Leu  
20 25 30

Leu Met Ser Tyr Ala Asn Asp Ala Phe Pro Glu Ser Thr Cys Pro Pro  
35 40 45

Ser Ser Thr Thr Thr Gln Glu Asp Tyr Asp Arg Leu Arg Pro Leu Ser  
50 55 60

Tyr Pro Met Thr Asp Val Phe Leu Ile Cys Phe Ser Val Val Asn Pro  
65 70 75 80

Ala Ser Phe Gln Asn Val Lys Glu Glu Trp Val Pro Glu Leu Lys Glu  
85 90 95

Tyr Ala Pro Asn Val Pro Phe Leu Leu Ile Gly Thr Gln Ile Asp Leu  
100 105 110

Arg Asp Asp Pro Lys Thr Leu Ala Arg Leu Asn Asp Met Lys Glu Lys  
115 120 125

Pro Ile Cys Val Glu Gln Gly Gln Lys Leu Ala Lys Glu Ile Gly Ala  
130 135 140

Cys Cys Tyr Val Glu Cys Ser Ala Leu Thr Gln Lys Gly Leu Lys Thr  
145 150 155 160

Val Phe Asp Glu Ala Ile Ile Ala Ile Leu Thr Pro Lys Lys His Thr  
165 170 175

Val Lys Lys Arg Ile Gly Ser Arg Cys Ile Asn Cys Cys Leu Ile Thr  
180 185 190



## 5380

&lt;210&gt; 6169

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6169

Ala Lys Cys Arg Pro Val Cys Ser Cys Val Phe Phe Leu Trp Leu Pro  
 1 5 10 15

His Leu Phe His Leu Gln Leu Asp Pro Pro Leu Gln Ile Glu Asn Ser  
 20 25 30

Gly Gly Gly Trp Gly Leu Lys Ser Arg Glu Pro Pro Phe Cys Ser Thr  
 35 40 45

Asn Phe Thr  
 50

&lt;210&gt; 6170

&lt;211&gt; 353

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6170

Arg Arg Arg Ser Val Leu Pro Val Thr Ala Ala Ala Ala Ala Ala Pro  
 1 5 10 15

Asp Thr Cys Gly Gly Gly Gly Asp Pro Ala Ala Gly Ala Glu Met Trp  
 20 25 30

Pro Leu Val Ala Ala Leu Leu Leu Gly Ser Ala Cys Cys Gly Ser Ala  
 35 40 45

Gln Leu Leu Phe Asn Lys Thr Lys Ser Val Glu Phe Thr Phe Cys Asn  
 50 55 60

Asp Thr Val Val Ile Pro Cys Phe Val Thr Asn Met Glu Ala Gln Asn  
 65 70 75 80

Thr Thr Glu Val Tyr Val Lys Trp Lys Phe Lys Gly Arg Asp Ile Tyr  
 85 90 95

Thr Phe Asp Gly Ala Leu Asn Lys Ser Thr Val Pro Thr Asp Phe Ser  
 100 105 110

Ser Ala Lys Ile Glu Val Ser Gln Leu Leu Lys Gly Asp Ala Ser Leu  
 115 120 125

## 5381

Lys Met Asp Lys Ser Asp Ala Val Ser His Thr Gly Asn Tyr Thr Cys  
 130 135 140  
 Glu Val Thr Glu Leu Thr Arg Glu Gly Glu Thr Ile Ile Glu Leu Lys  
 145 150 155 160  
 Tyr Arg Val Val Ser Trp Phe Ser Pro Asn Glu Asn Ile Leu Ile Val  
 165 170 175  
 Ile Phe Pro Ile Phe Ala Ile Leu Leu Phe Trp Gly Gln Phe Gly Ile  
 180 185 190  
 Lys Thr Leu Lys Tyr Arg Ser Gly Gly Met Asp Glu Lys Thr Ile Ala  
 195 200 205  
 Leu Leu Val Ala Gly Leu Val Ile Thr Val Ile Val Ile Val Gly Ala  
 210 215 220  
 Ile Leu Phe Val Pro Gly Glu Tyr Ser Leu Lys Asn Ala Thr Gly Leu  
 225 230 235 240  
 Gly Leu Ile Val Thr Ser Thr Gly Ile Leu Ile Leu Leu His Tyr Tyr  
 245 250 255  
 Val Phe Ser Thr Ala Ile Gly Leu Thr Ser Phe Val Ile Ala Ile Leu  
 260 265 270  
 Val Ile Gln Val Ile Ala Tyr Ile Leu Ala Val Val Gly Leu Ser Leu  
 275 280 285  
 Cys Ile Ala Ala Cys Ile Pro Met His Gly Pro Leu Leu Ile Ser Gly  
 290 295 300  
 Leu Ser Ile Leu Ala Leu Ala Gln Leu Leu Gly Leu Val Tyr Met Lys  
 305 310 315 320  
 Phe Val Ala Ser Asn Gln Lys Thr Ile Gln Pro Pro Arg Lys Ala Val  
 325 330 335  
 Glu Glu Pro Leu Asn Ala Phe Lys Glu Ser Lys Gly Met Met Asn Asp  
 340 345 350

Glu

&lt;210&gt; 6171

&lt;211&gt; 358

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

5382

&lt;400&gt; 6171

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Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly Gly Arg Ser Arg Thr
 1              5              10              15

Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr Ser Gly Trp Ala Leu
      20              25              30

Arg Ile Ser Arg Phe Leu Pro Gly Phe His Ser Phe Ala Pro Cys Thr
      35              40              45

Val Ala Pro Ser Leu Arg Ala Gln Pro Ala Lys Gln Arg Ala Pro Val
      50              55              60

Ala Gly Val Met Gln Arg Ala Arg Pro Thr Leu Trp Ala Ala Ala Leu
      65              70              75              80

Thr Leu Leu Val Leu Leu Arg Gly Pro Pro Val Ala Arg Ala Gly Ala
      85              90              95

Ser Ser Ala Gly Leu Gly Pro Val Val Arg Cys Glu Pro Cys Asp Ala
      100              105              110

Arg Ala Leu Ala Gln Cys Ala Pro Pro Pro Ala Val Cys Ala Glu Leu
      115              120              125

Val Arg Glu Pro Gly Cys Gly Cys Cys Leu Thr Cys Ala Leu Ser Glu
      130              135              140

Gly Gln Pro Cys Gly Ile Tyr Thr Glu Arg Cys Gly Ser Gly Leu Arg
      145              150              155              160

Cys Gln Pro Ser Pro Asp Glu Ala Arg Pro Leu Gln Ala Leu Leu Asp
      165              170              175

Gly Arg Gly Leu Cys Val Asn Ala Ser Ala Val Ser Arg Leu Arg Ala
      180              185              190

Tyr Leu Leu Pro Ala Pro Pro Ala Pro Gly Asn Ala Ser Glu Ser Glu
      195              200              205

Glu Asp Arg Ser Ala Gly Ser Val Glu Ser Pro Ser Val Ser Ser Thr
      210              215              220

His Arg Val Ser Asp Pro Lys Phe His Pro Leu His Ser Lys Ile Ile
      225              230              235              240

Ile Ile Lys Lys Gly His Ala Lys Asp Ser Gln Arg Tyr Lys Val Asp
      245              250              255

Tyr Glu Ser Gln Ser Thr Asp Thr Gln Asn Phe Ser Ser Glu Ser Lys

```

## 5383

260 265 270

Arg Glu Thr Glu Tyr Gly Pro Cys Arg Arg Glu Met Glu Asp Thr Leu  
275 280 285

Asn His Leu Lys Phe Leu Asn Val Leu Ser Pro Arg Gly Val His Ile  
290 295 300

Pro Asn Cys Asp Lys Lys Gly Phe Tyr Lys Lys Lys Gln Cys Arg Pro  
305 310 315 320

Ser Lys Gly Arg Lys Arg Gly Phe Cys Trp Cys Val Asp Lys Tyr Gly  
325 330 335

Gln Pro Leu Pro Gly Tyr Thr Thr Lys Gly Lys Glu Asp Val His Cys  
340 345 350

Tyr Ser Met Gln Ser Lys  
355

<210> 6172

<211> 140

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (93)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (101)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (104)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (126)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (134)

<223> Xaa equals any of the naturally occurring L-amino acids

## 5384

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (136)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (137)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6172

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Arg | Ile | Pro | Asp | Pro | Ala | Arg | Glu | Gly | Ser | Arg | Thr | Met | Glu | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Ser | Ser | Asn | Ser | Tyr | Phe | Ser | Val | Gly | Pro | Thr | Ser | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Val | Val | Leu | Leu | Tyr | Ser | Lys | Glu | Leu | Lys | Lys | Trp | Asp | Glu | Phe |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Ile | Leu | Glu | Glu | Arg | Arg | His | Val | Ser | Asp | Leu | Lys | Phe | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Cys | Tyr | Thr | Pro | Leu | Val | Tyr | Lys | Gly | Ile | Thr | Pro | Cys | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ile | Asp | Ile | Lys | Cys | Ser | Val | Leu | Asn | Ser | Glu | Xaa | Ile | His | Tyr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ile | Lys | Gln | Xaa | Ser | Lys | Xaa | Ser | Leu | Gln | Ser | Val | Gly | Val | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Lys | Leu | Val | Gly | Phe | Arg | Trp | Asn | Gly | Ser | Gln | Xaa | Gly | Phe |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Phe | Gly | Leu | Xaa | Leu | Xaa | Xaa | Ala | Ser | Phe |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |

&lt;210&gt; 6173

&lt;211&gt; 229

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (165)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

5385

<220>

&lt;221&gt; SITE

$\langle 222 \rangle$  (170)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6173

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Gly | Ala | Glu | Gly | Gly | Gly | Thr | Gly | Leu | Asp | Val | Gly | Arg | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

Ala Met Lys Pro Pro Ser Ser Ile Gln Thr Ser Glu Phe Asp Ser Ser  
20 25 30

Asp Glu Glu Pro Ile Glu Asp Glu Gln Thr Pro Ile His Ile Ser Trp  
35 40 45

Leu Ser Leu Ser Arg Val Asn Cys Ser Gln Phe Leu Gly Leu Cys Ala  
50 55 60

Leu Pro Gly Cys Lys Phe Lys Asp Val Arg Arg Asn Val Gln Lys Asp  
65 70 75 80

Thr Glu Glu Leu Lys Ser Cys Gly Ile Gln Asp Ile Phe Val Phe Cys  
85 90 95

Thr Arg Gly Glu Leu Ser Lys Tyr Arg Val Pro Asn Leu Leu Asp Leu  
100 105 110

Tyr Gln Gln Cys Gly Ile Ile Thr His His His Pro Ile Ala Asp Gly  
115 120 125

Gly Thr Pro Asp Ile Ala Ser Cys Cys Glu Ile Met Glu Glu Leu Thr  
130 135 140

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Cys | Leu | Lys | Asn | Tyr | Arg | Lys | Thr | Leu | Ile | His | Cys | Tyr | Gly | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

Leu Gly Arg Ser Xaa Leu Val Ala Ala Xaa Leu Leu Leu Tyr Leu Ser  
165 170 175

Asp Thr Ile Ser Pro Glu Gln Ala Ile Asp Ser Leu Arg Asp Leu Arg  
180 185 190

Gly Ser Gly Ala Ile Gln Thr Ile Lys Gln Tyr Asn Tyr Leu His Glu  
195 200 205

Phe Arg Asp Lys Leu Ala Ala His Leu Ser Ser Arg Asp Ser Gln Ser  
210 215 220

Arg Ser Val Ser Arg  
225

## 5386

&lt;210&gt; 6174

&lt;211&gt; 183

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6174

Ser Arg Leu Ser Leu Ser Arg Val Asn Cys Ser Gln Phe Leu Gly Leu  
 1 5 10 15

Cys Ala Leu Pro Gly Cys Lys Phe Lys Asp Val Arg Arg Asn Val Gln  
 20 25 30

Lys Asp Thr Glu Glu Leu Lys Ser Cys Gly Ile Gln Asp Ile Phe Val  
 35 40 45

Phe Cys Thr Arg Gly Glu Leu Ser Lys Tyr Arg Val Pro Asn Leu Leu  
 50 55 60

Asp Leu Tyr Gln Gln Cys Gly Ile Ile Thr His His His Pro Ile Ala  
 65 70 75 80

Asp Gly Gly Thr Pro Asp Ile Ala Ser Cys Cys Glu Ile Met Glu Glu  
 85 90 95

Leu Thr Thr Cys Leu Lys Asn Tyr Arg Lys Thr Leu Ile His Cys Tyr  
 100 105 110

Gly Gly Leu Gly Arg Ser Cys Leu Val Ala Ala Cys Leu Leu Leu Tyr  
 115 120 125

Leu Ser Asp Thr Ile Ser Pro Glu Gln Ala Ile Asp Ser Leu Arg Asp  
 130 135 140

Leu Arg Gly Ser Gly Ala Ile Gln Thr Ile Lys Gln Tyr Asn Tyr Leu  
 145 150 155 160

His Glu Phe Arg Asp Lys Leu Ala Ala His Leu Ser Ser Arg Asp Ser  
 165 170 175

Gln Ser Arg Ser Val Ser Arg  
 180

&lt;210&gt; 6175

&lt;211&gt; 594

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5387

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (148)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6175

Arg Arg Arg Ala Ala Val Glu Glu Lys Arg Arg Gln Arg Leu Glu Glu  
 1 5 10 15

Asp Lys Glu Arg His Glu Ala Val Val Arg Arg Thr Met Glu Arg Ser  
 20 25 30

Gln Lys Pro Lys Gln Lys His Asn Arg Trp Ser Trp Gly Gly Ser Leu  
 35 40 45

His Gly Ser Pro Ser Ile His Ser Ala Ala Arg Arg Leu Gln Leu Ser  
 50 55 60

Pro Trp Glu Ser Ser Val Val Asn Arg Leu Leu Thr Pro Thr His Ser  
 65 70 75 80

Phe Leu Ala Arg Ser Lys Ser Thr Ala Ala Leu Ser Gly Glu Ala Ala  
 85 90 95

Ser Cys Ser Pro Ile Ile Met Pro Tyr Lys Ala Ala His Ser Arg Asn  
 100 105 110

Ser Met Asp Arg Pro Lys Leu Phe Val Thr Pro Pro Glu Gly Ser Ser  
 115 120 125

Arg Arg Arg Ile Ile His Gly Thr Ala Ser Tyr Lys Lys Glu Arg Glu  
 130 135 140

Arg Glu Asn Xaa Leu Phe Leu Thr Ser Gly Thr Arg Arg Ala Val Ser  
 145 150 155 160

Pro Ser Asn Pro Lys Ala Arg Gln Pro Ala Arg Ser Arg Leu Trp Leu  
 165 170 175

Pro Ser Lys Ser Leu Pro His Leu Pro Gly Thr Pro Arg Pro Thr Ser  
 180 185 190

Ser Leu Pro Pro Gly Ser Val Lys Ala Ala Pro Ala Gln Val Arg Pro  
 195 200 205

Pro Ser Pro Gly Asn Ile Arg Pro Val Lys Arg Glu Val Lys Val Glu  
 210 215 220

Pro Glu Lys Lys Asp Pro Glu Lys Glu Pro Gln Lys Val Ala Asn Glu  
 225 230 235 240



## 5388

Pro Ser Leu Lys Gly Arg Ala Pro Leu Val Lys Val Glu Glu Ala Thr  
 245 250 255  
 Val Glu Glu Arg Thr Pro Ala Glu Pro Glu Val Gly Pro Ala Ala Pro  
 260 265 270  
 Ala Met Ala Pro Ala Pro Ala Ser Ala Pro Ala Pro Ala Ser Ala Pro  
 275 280 285  
 Ala Pro Ala Pro Val Pro Thr Pro Ala Met Val Ser Ala Pro Ser Ser  
 290 295 300  
 Thr Val Asn Ala Ser Ala Ser Val Lys Thr Ser Ala Gly Thr Thr Asp  
 305 310 315 320  
 Pro Glu Glu Ala Thr Arg Leu Leu Ala Glu Lys Arg Arg Leu Ala Arg  
 325 330 335  
 Glu Gln Arg Glu Lys Glu Glu Arg Glu Arg Arg Glu Gln Glu Glu Leu  
 340 345 350  
 Glu Arg Gln Lys Arg Glu Glu Leu Ala Gln Arg Val Ala Glu Glu Arg  
 355 360 365  
 Thr Thr Arg Arg Glu Glu Glu Ser Arg Arg Leu Glu Ala Glu Gln Ala  
 370 375 380  
 Arg Glu Lys Glu Glu Gln Leu Gln Arg Gln Ala Glu Glu Arg Ala Leu  
 385 390 395 400  
 Arg Glu Trp Glu Glu Ala Glu Arg Ala Gln Arg Gln Lys Glu Glu Glu  
 405 410 415  
 Ala Arg Val Arg Glu Glu Ala Glu Arg Val Arg Gln Glu Arg Glu Lys  
 420 425 430  
 His Phe Gln Arg Glu Glu Gln Glu Arg Leu Glu Arg Lys Lys Arg Leu  
 435 440 445  
 Glu Glu Ile Met Lys Arg Thr Arg Arg Thr Glu Ala Thr Asp Lys Lys  
 450 455 460  
 Thr Ser Asp Gln Arg Asn Gly Asp Ile Ala Lys Gly Ala Leu Thr Gly  
 465 470 475 480  
 Gly Thr Glu Val Ser Ala Leu Pro Cys Thr Thr Asn Ala Pro Gly Asn  
 485 490 495  
 Gly Lys Pro Val Gly Ser Pro His Val Val Thr Ser His Gln Ser Lys  
 500 505 510

## 5389

Val Thr Val Glu Ser Thr Pro Asp Leu Glu Lys Gln Pro Asn Glu Asn  
 515 520 525

Gly Val Ser Val Gln Asn Glu Asn Phe Glu Glu Ile Ile Asn Leu Pro  
 530 535 540

Ile Gly Ser Lys Pro Ser Arg Leu Asp Val Thr Asn Ser Glu Ser Pro  
 545 550 555 560

Glu Ile Pro Leu Asn Pro Ile Leu Ala Phe Asp Asp Glu Gly Thr Leu  
 565 570 575

Gly Pro Leu Pro Gln Val Asp Gly Val Gln Thr Gln Gln Thr Ala Glu  
 580 585 590

Val Ile

<210> 6176

<211> 293

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (270)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (280)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6176

Asn Thr Cys Glu Ser Asn His Gly Leu Gly Thr Thr Pro Pro Glu Asn  
 1 5 10 15

Gly Leu Ser Glu His Pro Cys Glu Thr Glu Gln Ile Asn Ala Lys Arg  
 20 25 30

Lys Asp Thr Thr Ser Asp Lys Asp Asp Ser Leu Gly Ser Gln Gln Thr  
 35 40 45

Asn Glu Gln Cys Ala Gln Lys Ala Glu Pro Thr Glu Ser Cys Glu Gln  
 50 55 60

Ile Ala Val Gln Val Asn Asn Gly Asp Ala Gly Arg Glu Met Pro Cys  
 65 70 75 80

## 5390

Pro Leu Pro Cys Asp Glu Glu Ser Pro Glu Ala Glu Leu His Asn His  
                                     85                                    90                                    95  
  
 Gly Ile Gln Ile Asn Ser Cys Ser Val Arg Leu Val Asp Ile Lys Lys  
                                     100                                    105                                    110  
  
 Glu Lys Pro Phe Ser Asn Ser Lys Val Glu Cys Gln Ala Gln Ala Arg  
                                     115                                    120                                    125  
  
 Thr His His Asn Gln Ala Ser Asp Ile Ile Val Ile Ser Ser Glu Asp  
                                     130                                    135                                    140  
  
 Ser Glu Gly Ser Thr Asp Val Asp Glu Pro Leu Glu Val Phe Ile Ser  
 145                                    150                                    155                                    160  
  
 Ala Pro Arg Ser Glu Pro Val Ile Asn Asn Asp Asn Pro Leu Glu Ser  
                                     165                                    170                                    175  
  
 Asn Asp Glu Lys Glu Gly Gln Glu Ala Thr Cys Ser Arg Pro Gln Ile  
                                     180                                    185                                    190  
  
 Val Pro Glu Pro Met Asp Phe Arg Lys Leu Ser Thr Phe Arg Glu Ser  
                                     195                                    200                                    205  
  
 Phe Lys Lys Arg Val Ile Gly Gln Asp His Asp Phe Ser Glu Ser Ser  
                                     210                                    215                                    220  
  
 Glu Glu Glu Ala Pro Ala Glu Ala Ser Ser Gly Ala Leu Arg Ser Lys  
 225                                    230                                    235                                    240  
  
 His Gly Glu Lys Ala Pro Met Thr Ser Arg Ser Thr Ser Thr Trp Arg  
                                     245                                    250                                    255  
  
 Ile Pro Ser Arg Lys Arg Arg Phe Ser Ser Ser Asp Phe Xaa Asp Leu  
                                     260                                    265                                    270  
  
 Ser Asn Lys Cys Leu Tyr Leu Xaa Gln Lys Leu His Ser Leu Phe Ile  
                                     275                                    280                                    285  
  
 Leu Lys Asp Ile Thr  
                                     290

&lt;210&gt; 6177

&lt;211&gt; 720

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

## 5391

&lt;222&gt; (693)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6177

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Thr | Gly | Pro | Thr | Gly | Ile | Lys | Tyr | Asp | Leu | Asp | Arg | His | Gln | Tyr |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Tyr | Val | Asp | Ala | Val | Cys | Tyr | Glu | Asn | Arg | Leu | His | Trp | Phe | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Tyr | Phe | Pro | Tyr | Leu | Val | Leu | Leu | His | Thr | Leu | Ile | Phe | Leu | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ser | Asn | Phe | Trp | Phe | Lys | Phe | Pro | Arg | Thr | Ser | Ser | Lys | Leu | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Phe | Val | Ser | Ile | Leu | Leu | Lys | Cys | Phe | Asp | Ser | Pro | Trp | Thr | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Leu | Ser | Glu | Thr | Val | Val | Glu | Glu | Ser | Asp | Pro | Lys | Pro | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ser | Lys | Met | Asn | Gly | Ser | Met | Asp | Lys | Lys | Ser | Ser | Thr | Val | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Val | Glu | Ala | Thr | Val | Pro | Met | Leu | Gln | Arg | Thr | Lys | Ser | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Glu | Gln | Gly | Ile | Val | Asp | Arg | Ser | Glu | Thr | Gly | Val | Leu | Asp | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Gly | Glu | Gln | Ala | Lys | Ala | Leu | Phe | Glu | Lys | Val | Lys | Lys | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Thr | His | Val | Glu | Glu | Gly | Asp | Ile | Val | Tyr | Arg | Leu | Tyr | Met | Arg |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Thr | Ile | Ile | Lys | Val | Ile | Lys | Phe | Ile | Leu | Ile | Ile | Cys | Tyr | Thr |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Tyr | Tyr | Val | His | Asn | Ile | Lys | Phe | Asp | Val | Asp | Cys | Thr | Val | Asp |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Glu | Ser | Leu | Thr | Gly | Tyr | Arg | Thr | Tyr | Arg | Cys | Ala | His | Pro | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Thr | Leu | Phe | Lys | Ile | Leu | Ala | Ser | Phe | Tyr | Ile | Ser | Leu | Val | Ile |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Tyr | Gly | Leu | Ile | Cys | Met | Tyr | Thr | Leu | Trp | Trp | Met | Leu | Arg | Arg |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |

## 5392

Ser Leu Lys Lys Tyr Ser Phe Glu Ser Ile Arg Glu Glu Ser Ser Tyr  
 260 265 270

Ser Asp Ile Pro Asp Val Lys Asn Asp Phe Ala Phe Met Leu His Leu  
 275 280 285

Ile Asp Gln Tyr Asp Pro Leu Tyr Ser Lys Arg Phe Ala Val Phe Leu  
 290 295 300

Ser Glu Val Ser Glu Asn Lys Leu Arg Gln Leu Asn Leu Asn Asn Glu  
 305 310 315 320

Trp Thr Leu Asp Lys Leu Arg Gln Arg Leu Thr Lys Asn Ala Gln Asp  
 325 330 335

Lys Leu Glu Leu His Leu Phe Met Leu Ser Gly Ile Pro Asp Thr Val  
 340 345 350

Phe Asp Leu Val Glu Leu Glu Val Leu Lys Leu Glu Leu Ile Pro Asp  
 355 360 365

Val Thr Ile Pro Pro Ser Ile Ala Gln Leu Thr Gly Leu Lys Glu Leu  
 370 375 380

Trp Leu Tyr His Thr Ala Ala Lys Ile Glu Ala Pro Ala Leu Ala Phe  
 385 390 395 400

Leu Arg Glu Asn Leu Arg Ala Leu His Ile Lys Phe Thr Asp Ile Lys  
 405 410 415

Glu Ile Pro Leu Trp Ile Tyr Ser Leu Lys Thr Leu Glu Glu Leu His  
 420 425 430

Leu Thr Gly Asn Leu Ser Ala Glu Asn Asn Arg Tyr Ile Val Ile Asp  
 435 440 445

Gly Leu Arg Glu Leu Lys Arg Leu Lys Val Leu Arg Leu Lys Ser Asn  
 450 455 460

Leu Ser Lys Leu Pro Gln Val Val Thr Asp Val Gly Val His Leu Gln  
 465 470 475 480

Lys Leu Ser Ile Asn Asn Glu Gly Thr Lys Leu Ile Val Leu Asn Ser  
 485 490 495

Leu Lys Lys Met Ala Asn Leu Thr Glu Leu Glu Leu Ile Arg Cys Asp  
 500 505 510

Leu Glu Arg Ile Pro His Ser Ile Phe Ser Leu His Asn Leu Gln Glu  
 515 520 525

## 5393

Ile Asp Leu Lys Asp Asn Asn Leu Lys Thr Ile Glu Glu Ile Ile Ser  
 530 535 540  
 Phe Gln His Leu His Arg Leu Thr Cys Leu Lys Leu Trp Tyr Asn His  
 545 550 555 560  
 Ile Ala Tyr Ile Pro Ile Gln Ile Gly Asn Leu Thr Asn Leu Glu Arg  
 565 570 575  
 Leu Tyr Leu Asn Arg Asn Lys Ile Glu Lys Ile Pro Thr Gln Leu Phe  
 580 585 590  
 Tyr Cys Arg Lys Leu Arg Tyr Leu Asp Leu Ser His Asn Asn Leu Thr  
 595 600 605  
 Phe Leu Pro Ala Asp Ile Gly Leu Leu Gln Asn Leu Gln Asn Leu Ala  
 610 615 620  
 Ile Thr Ala Asn Arg Ile Glu Thr Leu Pro Pro Glu Leu Phe Gln Cys  
 625 630 635 640  
 Arg Lys Leu Arg Ala Leu His Leu Gly Asn Asn Val Leu Gln Ser Leu  
 645 650 655  
 Pro Ser Arg Val Gly Glu Leu Thr Asn Leu Thr Gln Ile Glu Leu Arg  
 660 665 670  
 Gly Asn Arg Leu Glu Cys Leu Pro Val Glu Leu Gly Glu Cys Pro Leu  
 675 680 685  
 Leu Lys Arg Ser Xaa Leu Val Val Glu Glu Asp Leu Phe Asn Thr Leu  
 690 695 700  
 Pro Pro Glu Val Lys Glu Arg Leu Trp Arg Ala Asp Lys Glu Gln Ala  
 705 710 715 720

&lt;210&gt; 6178

&lt;211&gt; 27

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6178

Val Ser Gly Asp Tyr Gly His Pro Val Tyr Ile Val Gln Asp Gly Pro  
 1 5 10 15

## 5394

Pro Gln Ser Pro Pro Asn Ile Tyr Tyr Lys Val  
                   20                                  25

<210> 6179

<211> 154

<212> PRT

<213> Homo sapiens

<400> 6179

Asp Leu Cys Arg Leu Ser Cys Gly Arg Lys Met Pro Lys Val Lys Arg  
   1                                  5                                  10                                  15

Ser Arg Lys Ala Pro Pro Asp Gly Trp Glu Leu Ile Glu Pro Thr Leu  
                   20                                  25                                  30

Asp Glu Leu Asp Gln Lys Met Arg Glu Ala Glu Thr Glu Pro His Glu  
                   35                                  40                                  45

Gly Lys Arg Lys Val Glu Ser Leu Trp Pro Ile Phe Arg Ile His His  
                   50                                  55                                  60

Gln Lys Thr Arg Tyr Ile Phe Asp Leu Phe Tyr Lys Arg Lys Ala Ile  
   65                                  70                                  75                                  80

Ser Arg Glu Leu Tyr Glu Tyr Cys Ile Lys Glu Gly Tyr Ala Asp Lys  
                                   85                                  90                                  95

Asn Leu Ile Ala Lys Trp Lys Lys Gln Gly Tyr Glu Asn Leu Cys Cys  
                   100                                  105                                  110

Leu Arg Cys Ile Gln Thr Arg Asp Thr Asn Phe Gly Thr Asn Cys Ile  
                   115                                  120                                  125

Cys Arg Val Pro Lys Ser Lys Leu Glu Val Gly Arg Ile Ile Glu Cys  
                   130                                  135                                  140

Thr His Cys Gly Cys Arg Gly Cys Ser Gly  
   145                                  150

<210> 6180

<211> 442

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (22)

<223> Xaa equals any of the naturally occurring L-amino acids

Leu Glu Gln Glu Leu Gly Asp Gly Trp Gly His Ser Asp Leu His Lys

15

30

45

60

80

95

110

125

140

160

175

190

205

220

240

255



## 5396

Phe Lys Lys Gly Val Pro Val Lys Val Thr Asn Val Lys Asp Gly Thr  
 260 265 270

Thr His Gln Thr Ser Leu Glu Leu Phe Met Tyr Leu Asn Glu Val Ala  
 275 280 285

Gly Lys His Gly Val Gly Arg Ile Asp Ile Val Glu Asn Arg Phe Ile  
 290 295 300

Gly Met Lys Ser Arg Gly Ile Tyr Glu Thr Pro Ala Gly Thr Ile Leu  
 305 310 315 320

Tyr His Ala His Leu Asp Ile Glu Ala Phe Thr Met Asp Arg Glu Val  
 325 330 335

Arg Lys Ile Lys Gln Gly Leu Gly Leu Lys Phe Ala Glu Leu Val Tyr  
 340 345 350

Thr Gly Phe Trp His Ser Pro Glu Cys Glu Phe Val Arg His Cys Ile  
 355 360 365

Ala Lys Ser Gln Glu Arg Val Glu Gly Lys Val Gln Val Ser Val Leu  
 370 375 380

Lys Gly Gln Val Tyr Ile Leu Gly Arg Glu Ser Pro Leu Ser Leu Tyr  
 385 390 395 400

Asn Glu Glu Leu Val Ser Met Asn Val Gln Gly Asp Tyr Glu Pro Thr  
 405 410 415

Asp Ala Thr Gly Phe Ile Asn Ile Asn Ser Leu Arg Leu Lys Glu Tyr  
 420 425 430

His Arg Leu Gln Ser Lys Val Thr Ala Lys  
 435 440

<210> 6181

<211> 155

<212> PRT

<213> Homo sapiens

<400> 6181

Asp Ser Tyr Phe Asp Arg Ile Cys Ser His Ser Ser Cys Lys Leu Gln  
 1 5 10 15

Met Tyr Lys Leu His Leu Tyr Phe Tyr Arg Val Val Met Phe Tyr Met  
 20 25 30

Cys Met Val Gln Glu Lys Ile Gly Ser Asn Gln Ser Ala Val Asp Val

## 5397

35                                      40                                      45  
 Pro Lys Cys Lys His Arg His Thr His Ala His Thr His Lys His Thr  
     50                                      55                                      60  
 His Ser Ala Leu Arg Lys Gly Gln Val Ile Ser His Pro Asn Phe Thr  
     65                                      70                                      75                                      80  
 Ser Thr Asp Pro Leu Ala Pro Thr Pro Ala Ser Thr Val Thr Ser Lys  
                                     85                                      90                                      95  
 Ala Arg Ala Thr Cys Ala His Gln Thr Cys Ile Lys Gln Leu Ala Gly  
                                     100                                      105                                      110  
 Asp Gly Cys Gly Ala Gly Gly Leu Ser Asp Gly Ser Leu Leu Leu Pro  
                                     115                                      120                                      125  
 Leu Leu Arg Val Lys Leu Leu Ser Phe Leu Arg Val Tyr Leu Cys Gln  
                                     130                                      135                                      140  
 Val Cys Ala Phe Asn Cys Phe Tyr Phe Val Phe  
     145                                      150                                      155

<210> 6182

<211> 401

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (309)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (311)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (377)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6182

Asn Ile Lys Lys Arg Asp Glu Glu Leu Thr Glu Lys Met Lys Lys Ala  
     1                                      5                                      10                                      15

Glu Glu Glu Tyr Lys Leu Glu Lys Glu Glu Glu Ile Ser Asn Leu Lys  
                                     20                                      25                                      30

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ala | Ala | Phe | Glu | Lys | Asn | Ile | Asn | Thr | Glu | Arg | Thr | Leu | Lys | Thr | Gln |  |
| 35  |     |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |  |
| Ala | Val | Asn | Lys | Leu | Ala | Glu | Ile | Met | Asn | Arg | Lys | Asp | Phe | Lys | Ile |  |
| 50  |     |     |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |  |
| Asp | Arg | Lys | Lys | Ala | Asn | Thr | Gln | Asp | Leu | Arg | Lys | Lys | Glu | Lys | Glu |  |
| 65  |     |     |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     |  |
| Asn | Arg | Lys | Leu | Gln | Leu | Glu | Leu | Asn | Gln | Glu | Arg | Glu | Lys | Phe | Asn |  |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     |     | 95  |  |
| Gln | Met | Val | Val | Lys | His | Gln | Lys | Glu | Leu | Asn | Asp | Met | Gln | Ala | Gln |  |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |     | 110 |  |
| Leu | Val | Glu | Glu | Cys | Ala | His | Arg | Asn | Glu | Leu | Gln | Met | Gln | Leu | Ala |  |
| 115 |     |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |  |
| Ser | Lys | Glu | Ser | Asp | Ile | Glu | Gln | Leu | Arg | Ala | Lys | Leu | Leu | Asp | Leu |  |
| 130 |     |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |  |
| Ser | Asp | Ser | Thr | Ser | Val | Ala | Ser | Phe | Pro | Ser | Ala | Asp | Glu | Thr | Asp |  |
| 145 |     |     |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |  |
| Gly | Asn | Leu | Pro | Glu | Ser | Arg | Ile | Glu | Gly | Trp | Leu | Ser | Val | Pro | Asn |  |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |     | 175 |  |
| Arg | Gly | Asn | Ile | Lys | Arg | Tyr | Gly | Trp | Lys | Lys | Gln | Tyr | Val | Val | Val |  |
|     |     |     | 180 |     |     |     |     |     | 185 |     |     |     |     |     | 190 |  |
| Ser | Ser | Lys | Lys | Ile | Leu | Phe | Tyr | Asn | Asp | Glu | Gln | Asp | Lys | Glu | Gln |  |
| 195 |     |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |  |
| Ser | Asn | Pro | Ser | Met | Val | Leu | Asp | Ile | Asp | Lys | Leu | Phe | His | Val | Arg |  |
| 210 |     |     |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |  |
| Pro | Val | Thr | Gln | Gly | Asp | Val | Tyr | Arg | Ala | Glu | Thr | Glu | Glu | Ile | Pro |  |
| 225 |     |     |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     |  |
| Lys | Ile | Phe | Gln | Ile | Leu | Tyr | Ala | Asn | Glu | Gly | Glu | Cys | Arg | Lys | Asp |  |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     |     | 255 |  |
| Val | Glu | Met | Glu | Pro | Val | Gln | Gln | Ala | Glu | Lys | Thr | Asn | Phe | Gln | Asn |  |
|     |     |     | 260 |     |     |     |     |     | 265 |     |     |     |     |     | 270 |  |
| His | Lys | Gly | His | Glu | Phe | Ile | Pro | Thr | Leu | Tyr | His | Phe | Pro | Ala | Asn |  |
| 275 |     |     |     |     |     | 280 |     |     |     |     |     | 285 |     |     |     |  |
| Cys | Asp | Ala | Cys | Ala | Lys | Pro | Leu | Trp | His | Val | Phe | Lys | Pro | Pro | Pro |  |
| 290 |     |     |     |     |     | 295 |     |     |     |     |     | 300 |     |     |     |  |

## 5399

Ala Leu Glu Cys Xaa Arg Xaa His Val Lys Cys His Arg Asp His Leu  
 305 310 315 320

Asp Lys Lys Glu Asp Leu Ile Cys Pro Cys Lys Val Ser Tyr Asp Val  
 325 330 335

Thr Ser Ala Arg Asp Met Leu Leu Leu Ala Cys Ser Gln Asp Glu Gln  
 340 345 350

Lys Lys Trp Val Thr His Leu Val Lys Lys Ile Pro Lys Asn Pro Pro  
 355 360 365

Ser Gly Phe Val Arg Ala Ser Pro Xaa Thr Leu Ser Thr Arg Ser Thr  
 370 375 380

Ala Asn Gln Ser Phe Arg Lys Val Val Lys Asn Thr Ser Gly Lys Thr  
 385 390 395 400

Ser

&lt;210&gt; 6183

&lt;211&gt; 337

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6183

Gln Ser Arg Ser Asp Ser Arg Val Asp Pro Arg Val Arg Gly Pro Pro  
 1 5 10 15

Gly Pro Val Gly Pro Ser Gly Lys Glu Gly Asn Pro Gly Pro Leu Gly  
 20 25 30

Pro Ile Gly Pro Pro Gly Val Arg Gly Ser Val Gly Glu Ala Gly Pro  
 35 40 45

Glu Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro  
 50 55 60

Gly His Leu Thr Ala Ala Leu Gly Asp Ile Met Gly His Tyr Asp Glu  
 65 70 75 80

Ser Met Pro Asp Pro Leu Pro Glu Phe Thr Glu Asp Gln Ala Ala Pro  
 85 90 95

Asp Asp Lys Asn Lys Thr Asp Pro Gly Val His Ala Thr Leu Lys Ser  
 100 105 110

## 5400

Leu Ser Ser Gln Ile Glu Thr Met Arg Ser Pro Asp Gly Ser Lys Lys  
 115 120 125  
 His Pro Ala Arg Thr Cys Asp Asp Leu Lys Leu Cys His Ser Ala Lys  
 130 135 140  
 Gln Ser Gly Glu Tyr Trp Ile Asp Pro Asn Gln Gly Ser Val Glu Asp  
 145 150 155 160  
 Ala Ile Lys Val Tyr Cys Asn Met Glu Thr Gly Glu Thr Cys Ile Ser  
 165 170 175  
 Ala Asn Pro Ser Ser Val Pro Arg Lys Thr Trp Trp Ala Ser Lys Ser  
 180 185 190  
 Pro Asp Asn Lys Pro Val Trp Tyr Gly Leu Asp Met Asn Arg Gly Ser  
 195 200 205  
 Gln Phe Ala Tyr Gly Asp His Gln Ser Pro Asn Thr Ala Ile Thr Gln  
 210 215 220  
 Met Thr Phe Leu Arg Leu Leu Ser Lys Glu Ala Ser Gln Asn Ile Thr  
 225 230 235 240  
 Tyr Ile Cys Lys Asn Ser Val Gly Tyr Met Asp Asp Gln Ala Lys Asn  
 245 250 255  
 Leu Lys Lys Ala Val Val Leu Lys Gly Ala Asn Asp Leu Asp Ile Lys  
 260 265 270  
 Ala Glu Gly Asn Ile Arg Phe Arg Tyr Ile Val Leu Gln Asp Thr Cys  
 275 280 285  
 Ser Lys Arg Asn Gly Asn Val Gly Lys Thr Val Phe Glu Tyr Arg Thr  
 290 295 300  
 Gln Asn Val Ala Arg Leu Pro Ile Ile Asp Leu Ala Pro Val Asp Val  
 305 310 315 320  
 Gly Gly Thr Asp Gln Glu Phe Gly Val Glu Ile Gly Pro Val Cys Phe  
 325 330 335

Val

&lt;210&gt; 6184

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5401

&lt;400&gt; 6184

Leu His Cys Phe Tyr Ser Gly Leu Gly Phe Arg Lys Thr Gly Thr Val  
1 5 10 15

Leu Ser Val His Arg Asn Thr Cys Gln Cys Gln Gly Phe Gln Ser Gly  
20 25 30

Val Tyr Pro Asn Trp Ser Gly Arg Glu Gly Gln Thr His Ser Gln Arg  
35 40 45

Pro Pro Cys Pro Arg Ser Asp Ser Ser Pro Leu Ala Ala Pro Thr Gly  
50 55 60

Ala Leu Gly Trp Ser Gly Ser Trp Gly Ser Val Pro Leu Ile Ala Gly  
65 70 75 80

Leu Cys Ser Pro Gly Phe Gly Ile Tyr Val Gly Thr Thr Pro Gly Leu  
85 90 95

Leu Ser Lys Gly Leu Trp Leu Leu  
100

&lt;210&gt; 6185

&lt;211&gt; 74

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6185

Gly Leu Thr Trp Ala Phe Arg Tyr Arg Pro Ala Gly Ile Ile Val Met  
1 5 10 15

Ala Leu Leu Gly Met Phe Asn Val His Arg His Gly Ala Ile Asn Ser  
20 25 30

Ala Ala Ile Leu Leu Tyr Ala Leu Thr Cys Cys Ile Ser Gly Tyr Val  
35 40 45

Ser Ser His Phe Tyr Arg Gln Ile Gly Gly Glu Arg Trp Val Trp Glu  
50 55 60

His His Ser His His Gln Ser Leu Leu Trp  
65 70

&lt;210&gt; 6186

&lt;211&gt; 134

&lt;212&gt; PRT

## 5402

&lt;213&gt; Homo sapiens

&lt;400&gt; 6186

Thr Leu Leu Glu Ala Leu Thr Val Ala Val Val Val Thr Phe Tyr Asp  
 1 5 10 15  
 Val Tyr Ile Ile Leu Gln Ala Phe Ile Leu Thr Thr Thr Val Phe Phe  
 20 25 30  
 Gly Leu Thr Val Tyr Thr Leu Gln Ser Lys Lys Asp Phe Ser Lys Phe  
 35 40 45  
 Gly Ala Gly Leu Phe Ala Leu Leu Trp Ile Leu Cys Leu Ser Gly Phe  
 50 55 60  
 Leu Lys Phe Phe Phe Tyr Ser Glu Ile Met Glu Leu Val Leu Ala Ala  
 65 70 75 80  
 Ala Gly Ala Leu Leu Phe Cys Gly Phe Ile Ile Tyr Asp Thr His Ser  
 85 90 95  
 Leu Met His Lys Leu Ser Pro Glu Glu Tyr Val Leu Ala Ala Ile Ser  
 100 105 110  
 Leu Tyr Leu Asp Ile Ile Asn Leu Phe Leu His Leu Leu Arg Phe Leu  
 115 120 125  
 Glu Ala Val Asn Lys Lys  
 130

&lt;210&gt; 6187

&lt;211&gt; 220

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (4)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6187

Asp Tyr Ala Xaa Thr Pro Gln Gly Leu Cys Tyr Asp Val Ala Cys Thr  
 1 5 10 15  
 Arg Lys Leu Gly Pro Leu Glu Gly Ser Ser Arg Ala Ala Ala Ala Ala  
 20 25 30  
 Phe Gly Glu Ser Ala Gly Gln Met Ser Asn Glu Arg Gly Phe Glu Asn  
 35 40 45

## 5403

Val Glu Leu Gly Val Ile Gly Lys Lys Lys Lys Val Pro Arg Arg Val  
 50 55 60  
 Ile His Phe Val Ser Gly Glu Thr Met Glu Glu Tyr Ser Thr Asp Glu  
 65 70 75 80  
 Asp Glu Val Asp Gly Leu Glu Lys Lys Asp Val Leu Pro Thr Val Asp  
 85 90 95  
 Pro Thr Lys Leu Thr Trp Gly Pro Tyr Leu Trp Phe Tyr Met Leu Arg  
 100 105 110  
 Ala Ala Thr Ser Thr Leu Ser Val Cys Asp Phe Leu Gly Glu Lys Ile  
 115 120 125  
 Ala Ser Val Leu Gly Ile Ser Thr Pro Lys Tyr Gln Tyr Ala Ile Asp  
 130 135 140  
 Glu Tyr Tyr Arg Met Lys Lys Glu Glu Glu Glu Glu Glu Glu Asn  
 145 150 155 160  
 Arg Met Ser Glu Glu Ala Glu Lys Gln Tyr Gln Gln Asn Lys Leu Gln  
 165 170 175  
 Thr Asp Ser Ile Val Gln Thr Asp Gln Pro Glu Thr Val Ile Ser Ser  
 180 185 190  
 Ser Phe Val Asn Val Asn Phe Glu Met Glu Gly Asp Ser Glu Val Ile  
 195 200 205  
 Met Glu Ser Lys Gln Asn Pro Val Ser Val Pro Pro  
 210 215 220

&lt;210&gt; 6188

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (6)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids



## 5404

<220>  
 <221> SITE  
 <222> (36)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (39)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (65)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (100)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (101)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (103)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6188  
 Glu Arg Cys Gly Xaa Xaa Arg Glu Ala Gln Glu Gly Asp Leu Gln Gly  
   1                  5                  10                  15  
 Gln Glu Gly Ala Glu Ala Ser His Ala Gly Gly Pro Ala Ala Asp His  
                   20                  25                  30  
 Tyr Ser Gly Xaa Ala His Xaa Gly Arg Gly Arg Ala Leu Asp Arg Gly  
           35                  40                  45  
 Val Cys Val Arg Gly His Ala Pro His His His Arg Val Ser Pro Ala  
       50                  55                  60  
 Xaa Gly Arg Gly Pro His Arg Gln Gly Glu Glu Cys Ser Gly Gly Gly  
   65                  70                  75                  80  
 Arg Lys Gln Lys Met Ala Phe Ile Phe Arg Asp Val His Val Ala Glu  
                   85                  90                  95  
 Leu Leu Ser Xaa Xaa His Xaa  
           100

## 5405

&lt;210&gt; 6189

&lt;211&gt; 166

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (7)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6189

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Phe | Trp | Leu | Gln | Lys | Xaa | His | Phe | Leu | Cys | Ala | Asn | Lys | Asn | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ile | Lys | Tyr | Asp | Val | Pro | Pro | Thr | Trp | Thr | His | Ser | Val | Pro | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ala | Lys | Pro | Thr | Ala | Ala | Ala | Thr | Ser | Leu | Gly | Leu | Arg | Cys | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Cys | Phe | Phe | Gln | Asp | Arg | Asn | Gln | Asn | Val | Arg | Asn | Thr | Ala | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | His | Leu | Glu | Thr | Lys | Arg | Arg | Met | Arg | Ser | Ser | Ala | Glu | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gly | Lys | Ser | Gln | Asn | Ser | Asn | Thr | Leu | Ala | Gly | Ala | Trp | Gly | Val |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asn | Arg | Arg | Arg | Glu | Glu | Ala | Phe | Pro | Ser | Leu | Gln | Arg | Arg | Asn |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Gln | Pro | Lys | Leu | Pro | Gly | Ser | Gln | Asn | Gln | Phe | Phe | Tyr | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Val | Pro | Leu | Leu | Ser | Phe | Gln | Leu | Leu | Ala | Thr | Gly | Arg | Cys | Cys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Lys | Gly | Phe | Ala | Leu | Arg | Leu | Gln | Glu | Glu | Ala | Ala | Gly | Arg | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Val | Leu | Gly | Phe |
|     |     |     |     | 165 |     |

&lt;210&gt; 6190

&lt;211&gt; 90

## 5406

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (20)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (21)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6190

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Gln | Val | Glu | Lys | Pro | Leu | Tyr | Pro | Phe | Asn | Pro | Leu | Trp | Pro |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Phe | Pro | Xaa | Xaa | Val | Asp | Ala | Thr | Arg | Glu | Thr | Asn | Arg | Leu | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Ile | Asn | His | Ser | Lys | Cys | Gly | Asn | Cys | Gln | Thr | Lys | Leu | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ile | Asp | Gly | Val | Pro | His | Leu | Ile | Leu | Ile | Ala | Ser | Arg | Asp | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Gly | Glu | Glu | Leu | Leu | Tyr | Asp | Tyr | Gly | Asp | Arg | Ser | Lys | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ile | Glu | Ala | His | Pro | Trp | Leu | Lys | His |
|     |     |     | 85  |     |     |     |     | 90  |     |

&lt;210&gt; 6191

&lt;211&gt; 162

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6191

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Lys | Met | Thr | Glu | Pro | Gly | Ala | Ser | Pro | Glu | Asp | Pro | Trp | Val | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Glu | Tyr | Ala | Tyr | Ser | Asp | Asn | Ser | Leu | Asp | Pro | Gly | Leu | Phe | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Thr | Arg | Lys | Gly | Ser | Val | Val | Ser | Arg | Ala | Asn | Ser | Ile | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Ser | Ala | Ser | Ser | Val | Pro | Asn | Thr | Asp | Asp | Glu | Asp | Ser | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

## 5407

Tyr His Gln Glu Ala Tyr Lys Glu Ser Tyr Lys Asp Arg Arg Arg Arg  
 65 70 75 80  
 Ala His Thr Gln Ala Glu Gln Lys Arg Arg Asp Ala Ile Lys Arg Gly  
 85 90 95  
 Tyr Asp Asp Leu Gln Thr Ile Val Pro Thr Cys Gln Gln Gln Asp Phe  
 100 105 110  
 Ser Ile Gly Ser Gln Lys Leu Ser Lys Ala Ile Val Leu Gln Lys Thr  
 115 120 125  
 Ile Asp Tyr Ile Gln Phe Leu His Lys Glu Lys Lys Lys Gln Glu Glu  
 130 135 140  
 Glu Val Ser Arg Tyr Ala Arg Met Tyr Arg Pro Lys Asp His Glu Ser  
 145 150 155 160  
 Glu Leu

<210> 6192  
 <211> 350  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (126)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (135)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (141)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (143)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE

## 5408

&lt;222&gt; (145)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (148)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (150)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6192

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Thr | Ser | Gly | Cys | Trp | Leu | Leu | Leu | Val | Leu | Val | Leu | Val | Leu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Pro | Arg | Gly | Cys | Arg | Ala | Arg | Arg | Gly | Leu | Arg | Gly | Leu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | His | Ser | Gln | Arg | Leu | Leu | Phe | Arg | Ile | Gly | Tyr | Ser | Leu | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Thr | Trp | Leu | Gly | Tyr | Leu | Phe | Tyr | Arg | Gln | Gln | Leu | Arg | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Asn | Arg | Tyr | Pro | Lys | Gly | His | Ser | Lys | Thr | Gln | Pro | Arg | Leu |
| 65  |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Asn | Gly | Val | Lys | Val | Leu | Pro | Ile | Pro | Val | Leu | Ser | Asp | Asn | Tyr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Tyr | Leu | Ile | Ile | Asp | Thr | Gln | Ala | Gln | Leu | Ala | Val | Ala | Val | Asp |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Asp | Pro | Arg | Ala | Val | Gln | Ala | Ser | Ile | Glu | Lys | Xaa | Gly | Val |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Val | Ala | Ile | Leu | Xaa | Thr | His | Lys | His | Trp | Xaa | His | Xaa | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asn | Arg | Xaa | Leu | Xaa | Arg | Gly | His | Arg | Asp | Cys | Arg | Val | Tyr | Gly |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Gln | Asp | Gly | Ile | Pro | Tyr | Leu | Thr | His | Pro | Leu | Cys | His | Gln |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Val | Val | Ser | Val | Gly | Arg | Leu | Gln | Ile | Arg | Ala | Leu | Ala | Thr | Pro |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | His | Thr | Gln | Gly | His | Leu | Val | Tyr | Leu | Leu | Asp | Gly | Glu | Pro | Tyr |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5409

|   |     |         |
|---|-----|---------|
| 195   | 200 | 205     |
| Lys Gly Pro Ser Cys Leu Phe Ser Gly Asp Leu Leu Phe Leu Ser Gly |     |         |
| 210   | 215 | 220     |
| Cys Gly Arg Thr Phe Glu Gly Asn Ala Glu Thr Met Leu Ser Ser Leu |     |         |
| 225   | 230 | 235 240 |
| Asp Thr Val Leu Gly Leu Gly Asp Asp Thr Leu Leu Trp Pro Gly His |     |         |
|   | 245 | 250 255 |
| Glu Tyr Ala Glu Glu Asn Leu Gly Phe Ala Gly Val Val Glu Pro Glu |     |         |
|   | 260 | 265 270 |
| Asn Leu Ala Arg Glu Arg Lys Met Gln Trp Val Gln Arg Gln Arg Leu |     |         |
|   | 275 | 280 285 |
| Glu Arg Lys Gly Thr Cys Pro Ser Thr Leu Gly Glu Glu Arg Ser Tyr |     |         |
|   | 290 | 295 300 |
| Asn Pro Phe Leu Arg Thr His Cys Leu Ala Leu Gln Glu Ala Leu Gly |     |         |
| 305   | 310 | 315 320 |
| Pro Gly Pro Gly Pro Thr Gly Asp Asp Asp Tyr Ser Arg Ala Gln Leu |     |         |
|   | 325 | 330 335 |
| Leu Glu Glu Leu Arg Arg Leu Lys Asp Met His Lys Ser Lys         |     |         |
|   | 340 | 345 350 |

&lt;210&gt; 6193

&lt;211&gt; 200

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (16)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (19)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6193

|   |
|---|
| Ile Ser Tyr Ser Arg Trp Lys Thr Leu His Thr Val Leu Pro Gln Xaa |
| 1 5 10 15   |

Ile Arg Xaa Leu Leu Phe Cys Leu Leu Gln Lys Asp Pro Cys Pro Val

## 5410

|   |     |     |     |     |    |
|---|-----|-----|-----|-----|----|
|   | 20  |     | 25  |     | 30 |
| Ala Glu Arg Gly Asn Asp Lys Asp Phe Thr Leu Asn Asp Phe Gly Phe | 35  | 40  | 45  |     |    |
| Met Ile Phe His Ser Pro Tyr Cys Lys Leu Val Gln Lys Ser Leu Ala | 50  | 55  | 60  |     |    |
| Arg Met Leu Leu Asn Asp Phe Leu Asn Asp Gln Asn Arg Asp Lys Asn | 65  | 70  | 75  | 80  |    |
| Ser Ile Tyr Ser Gly Leu Glu Ala Phe Gly Asp Val Lys Leu Glu Asp | 85  | 90  | 95  |     |    |
| Thr Tyr Phe Asp Arg Asp Val Glu Lys Ala Phe Met Lys Ala Ser Ser | 100 | 105 | 110 |     |    |
| Glu Leu Phe Ser Gln Lys Thr Lys Ala Ser Leu Leu Val Ser Asn Gln | 115 | 120 | 125 |     |    |
| Asn Gly Asn Met Tyr Thr Ser Ser Val Tyr Gly Ser Leu Ala Ser Val | 130 | 135 | 140 |     |    |
| Leu Ala Gln Tyr Ser Pro Gln Gln Leu Ala Gly Lys Arg Ile Gly Val | 145 | 150 | 155 | 160 |    |
| Phe Ser Tyr Gly Ser Gly Leu Ala Ala Thr Leu Tyr Ser Leu Lys Val | 165 | 170 | 175 |     |    |
| Thr Gln Asp Ala Thr Pro Gly Ser Ala Leu Asp Lys Ile Thr Ala Ser | 180 | 185 | 190 |     |    |
| Leu Cys Asp Leu Lys Ser Lys Ala                                 | 195 | 200 |     |     |    |

&lt;210&gt; 6194

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6194

|   |    |    |    |    |
|---|----|----|----|----|
| Glu Glu Leu Arg Glu Ser Ala Ala Ala Gly Ser Ala Asp Ala Met Asp | 1  | 5  | 10 | 15 |
| Asn Val Gln Pro Lys Ile Lys His Arg Pro Phe Cys Phe Ser Val Lys | 20 | 25 | 30 |    |
| Gly His Val Lys Met Leu Arg Leu Asp Ile Ile Asn Ser Leu Val Thr | 35 | 40 | 45 |    |

## 5411

Thr Val Phe Met Leu Ile Val Ser Val Leu Ala Leu Ile Pro Glu Thr  
 50 55 60

Thr Thr Leu Thr Val Gly Gly Gly Val Phe Ala Leu Val Thr Ala Val  
 65 70 75 80

Cys Cys Leu Ala Asp Gly Ala Leu Ile Tyr Arg Lys Leu Leu Phe Asn  
 85 90 95

Pro Ser Gly Pro Tyr Gln Lys Lys Pro Val His Glu Lys Lys Glu Val  
 100 105 110

Leu

<210> 6195

<211> 480

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (196)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (392)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6195

Ser Asp Lys Trp Pro Thr Ala Val Arg Ala Asn Gly His Leu Leu Leu  
 1 5 10 15

Asn Ser Glu Lys Met Ser Lys Ser Thr Gly Asn Phe Leu Thr Leu Thr  
 20 25 30

Gln Ala Ile Asp Lys Phe Ser Ala Asp Gly Met Arg Leu Ala Leu Ala  
 35 40 45

Asp Ala Gly Asp Thr Val Glu Asp Ala Asn Phe Val Glu Ala Met Ala  
 50 55 60

Asp Ala Gly Ile Leu Arg Leu Tyr Thr Trp Val Glu Trp Val Lys Glu  
 65 70 75 80

Met Val Ala Asn Trp Asp Ser Leu Arg Ser Gly Pro Ala Ser Thr Phe  
 85 90 95



## 5412

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Asp | Arg | Val | Phe | Ala | Ser | Glu | Leu | Asn | Ala | Gly | Ile | Ile | Lys | Thr | 100 | 105 | 110 |     |
| Asp | Gln | Asn | Tyr | Glu | Lys | Met | Met | Phe | Lys | Glu | Ala | Leu | Lys | Thr | Gly | 115 | 120 | 125 |     |
| Phe | Phe | Glu | Phe | Gln | Ala | Ala | Lys | Asp | Lys | Tyr | Arg | Glu | Leu | Ala | Val | 130 | 135 | 140 |     |
| Glu | Gly | Met | His | Arg | Glu | Leu | Val | Phe | Arg | Phe | Ile | Glu | Val | Gln | Thr | 145 | 150 | 155 | 160 |
| Leu | Leu | Leu | Ala | Pro | Phe | Cys | Pro | His | Leu | Cys | Glu | His | Ile | Trp | Thr | 165 | 170 | 175 |     |
| Leu | Leu | Gly | Lys | Pro | Asp | Ser | Ile | Met | Asn | Ala | Ser | Trp | Pro | Val | Ala | 180 | 185 | 190 |     |
| Gly | Pro | Val | Xaa | Glu | Val | Leu | Ile | His | Ser | Ser | Gln | Tyr | Leu | Met | Glu | 195 | 200 | 205 |     |
| Val | Thr | His | Asp | Leu | Arg | Leu | Arg | Leu | Lys | Asn | Tyr | Met | Met | Pro | Ala | 210 | 215 | 220 |     |
| Lys | Gly | Lys | Lys | Thr | Asp | Lys | Gln | Pro | Leu | Gln | Lys | Pro | Ser | His | Cys | 225 | 230 | 235 | 240 |
| Thr | Ile | Tyr | Val | Ala | Lys | Asn | Tyr | Pro | Pro | Trp | Gln | His | Thr | Thr | Leu | 245 | 250 | 255 |     |
| Ser | Val | Leu | Arg | Lys | His | Phe | Glu | Ala | Asn | Asn | Gly | Lys | Leu | Pro | Asp | 260 | 265 | 270 |     |
| Asn | Lys | Val | Ile | Ala | Ser | Glu | Leu | Gly | Ser | Met | Pro | Glu | Leu | Lys | Lys | 275 | 280 | 285 |     |
| Tyr | Met | Lys | Lys | Val | Met | Pro | Phe | Val | Ala | Met | Ile | Lys | Glu | Asn | Leu | 290 | 295 | 300 |     |
| Glu | Lys | Met | Gly | Pro | Arg | Ile | Leu | Asp | Leu | Gln | Leu | Glu | Phe | Asp | Glu | 305 | 310 | 315 | 320 |
| Lys | Ala | Val | Leu | Met | Glu | Asn | Ile | Val | Tyr | Leu | Thr | Asn | Ser | Leu | Glu | 325 | 330 | 335 |     |
| Leu | Glu | His | Ile | Glu | Val | Lys | Phe | Ala | Ser | Glu | Ala | Glu | Asp | Lys | Ile | 340 | 345 | 350 |     |
| Arg | Glu | Asp | Cys | Cys | Pro | Gly | Lys | Pro | Leu | Asn | Val | Phe | Arg | Ile | Glu | 355 | 360 | 365 |     |

## 5413

Pro Gly Val Ser Val Ser Leu Val Asn Pro Gln Pro Ser Asn Gly His  
 370 375 380

Phe Ser Thr Lys Ile Glu Ile Xaa Gln Gly Asp Asn Cys Asp Ser Ile  
 385 390 395 400

Ile Arg Arg Leu Met Lys Met Asn Arg Gly Ile Lys Asp Leu Ser Lys  
 405 410 415

Val Lys Leu Met Arg Phe Asp Asp Pro Leu Leu Gly Pro Arg Arg Val  
 420 425 430

Pro Val Leu Gly Lys Glu Tyr Thr Glu Lys Thr Pro Ile Ser Glu His  
 435 440 445

Ala Val Phe Asn Val Asp Leu Met Ser Lys Lys Ile His Leu Thr Glu  
 450 455 460

Asn Gly Ile Arg Val Asp Ile Gly Asp Thr Ile Ile Tyr Leu Val His  
 465 470 475 480

<210> 6196

<211> 110

<212> PRT

<213> Homo sapiens

<400> 6196

Met Lys Thr Arg Thr Ile Ser Phe Ala Arg Ile Pro Asn Leu Ala Arg  
 1 5 10 15

Pro Ala Ala Pro Ser Leu Arg Pro Asp Asp Val Phe Ile Ala Val Lys  
 20 25 30

Thr Thr Arg Lys Asn His Gly Pro Arg Leu Arg Leu Leu Leu Arg Thr  
 35 40 45

Trp Ile Ser Arg Ala Arg Gln Gln Thr Phe Ile Phe Thr Asp Gly Asp  
 50 55 60

Asp Pro Glu Leu Glu Leu Gln Gly Gly Asp Arg Val Ile Asn Thr Asn  
 65 70 75 80

Cys Ser Ala Val Arg Thr Arg Gln Ala Leu Cys Cys Lys Met Ser Val  
 85 90 95

## 5414

Glu Tyr Asp Lys Phe Ile Glu Ser Gly Arg Lys Trp Phe Cys  
 100 105 110

<210> 6197

<211> 74

<212> PRT

<213> Homo sapiens

<400> 6197

Trp Leu Asn Ala Ala Lys Met Arg Ile Lys Gly Met Lys Trp Phe Asn  
 1 5 10 15

Thr Leu Ser His Asn Arg Trp Leu Glu Gln Glu Thr Asp Arg Ile Phe  
 20 25 30

Asp Phe Gly Lys Asn Ser Val Val Pro Thr Gly Phe Gly Trp Leu Gly  
 35 40 45

Asn Lys Gly Gln Ile Lys Glu Glu Met Gly Thr His Leu Trp Ile Thr  
 50 55 60

Ala Arg Met Leu His Val Tyr Ser Val Ala  
 65 70

<210> 6198

<211> 251

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (60)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6198

Leu Leu Pro Ala Gly Arg Lys Ala Arg Leu Ser Glu Ala Pro Gly Gly  
 1 5 10 15

Lys Lys Ser Leu Ser Met Leu His Tyr Ile Arg Gly Ala Ala Pro Lys  
 20 25 30

Asp Ile Pro Val Pro Leu Ser His Ser Thr Asn Gly Lys Ser Lys Pro  
 35 40 45

Trp Glu Pro Phe Val Ala Glu Glu Phe Ala His Xaa Phe His Glu Ser  
 50 55 60

## 5415

Val Leu Gln Ser Thr Gln Lys Ala Leu Gln Lys His Lys Gly Ser Val  
 65 70 75 80  
 Ala Val Leu Ser Ala Glu Gln Asn His Lys Val Asp Thr Ser Val His  
 85 90 95  
 Tyr Asn Ile Pro Glu Leu Gln Ser Ser Ser Arg Ala Pro Pro Pro Gln  
 100 105 110  
 His Asn Gly Gln Gln Glu Pro Pro Thr Ala Arg Lys Gly Pro Pro Thr  
 115 120 125  
 Gln Glu Leu Asp Arg Asp Ser Glu Glu Glu Glu Glu Glu Asp Asp Glu  
 130 135 140  
 Asp Gly Glu Asp Glu Glu Glu Val Pro Lys Arg Lys Trp Gln Gly Ile  
 145 150 155 160  
 Glu Ala Val Phe Glu Ala Tyr Gln Glu His Ile Glu Glu Gln Asn Leu  
 165 170 175  
 Glu Arg Gln Val Leu Gln Thr Gln Cys Arg Arg Leu Glu Ala Arg His  
 180 185 190  
 Tyr Ser Leu Ser Leu Thr Ala Glu Gln Leu Ser His Ser Val Ala Glu  
 195 200 205  
 Leu Arg Ser Gln Lys Gln Lys Met Val Ser Glu Arg Glu Arg Leu Gln  
 210 215 220  
 Ala Glu Leu Asp His Leu Arg Lys Cys Leu Ala Leu Pro Ala Met His  
 225 230 235 240  
 Trp Pro Arg Gly Tyr Leu Lys Gly Tyr Pro Arg  
 245 250

&lt;210&gt; 6199

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6199

Glu Arg Val Ser Val Gly Gly Leu Val Gly Glu Val Ala Cys Ala Cys  
 1 5 10 15

Arg Asp Cys Ile Pro Glu Thr Met Ala Glu Gly Asp Asn Arg Ser Thr  
 20 25 30

Asn Leu Leu Ala Ala Glu Thr Ala Ser Leu Glu Glu Lys Pro Lys Met

## 5416

35                                      40                                      45  
 Tyr Phe Met Thr Met Ile Val Ser Leu Ala Ala Val Ala Trp Val Gly  
     50                                      55                                      60  
 Gln Gln Val His Asn Leu Leu Leu Thr Tyr Leu Ile Val Thr Ser Leu  
     65                                      70                                      75                                      80  
 Leu Leu Leu Pro Gly Leu Asn Gln His Gly Ile Ile Leu Lys Tyr Ile  
                                     85                                      90                                      95  
 Gly Met Ala Lys Arg Glu Ile Asn Lys Leu Leu Lys Gln Lys Glu Lys  
                                     100                                      105                                      110  
 Lys Asn Glu  
                                     115

<210> 6200  
 <211> 63  
 <212> PRT  
 <213> Homo sapiens

<400> 6200  
 Leu Phe Val Ser Phe Ile Phe Thr Leu Lys Gln Glu Leu Ser Tyr Leu  
     1                                      5                                      10                                      15  
 Ile Ile Lys Val Ser Tyr Val Leu Ser Ala Arg Thr Phe Leu Ala Phe  
                                     20                                      25                                      30  
 Val Arg Met Cys Leu His Met Ser Ile Ile Asn Pro His Val Tyr Thr  
                                     35                                      40                                      45  
 Ile Val Ser Tyr Val Leu Leu Pro Asp Ser Ser Leu Cys Ile Leu  
                                     50                                      55                                      60

<210> 6201  
 <211> 141  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (107)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6201  
 Pro Leu Pro Ser Gln Gly Ala Arg Trp Trp Leu Trp His Ser Cys Arg

## 5417

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Val Val Phe Phe Ser Leu Arg Trp Ser Leu Thr Leu Val Thr Pro Ala | 20  | 25  | 30  |
| Gly Met Trp Trp Cys Lys Gln Leu Thr Ala Ala Leu Thr Leu Arg Leu | 35  | 40  | 45  |
| Lys Arg Ser Phe Cys Leu Gly Leu Leu Ser Ser Trp Asp Pro Arg Arg | 50  | 55  | 60  |
| Glu Ser Pro His Pro Val His Val Pro Ala Gly Leu Asp Met Arg Gly | 65  | 70  | 75  |
| Arg Cys Val Phe Pro Ala Thr Phe Ser Ser Ser Phe Leu Arg Gln Thr | 85  | 90  | 95  |
| Leu Ala Pro Ser Pro Arg Pro Glu Cys Gly Xaa Ala Asn Thr Ala His | 100 | 105 | 110 |
| Cys Ser Leu Asp Pro Gln Ala Gln Ala Ile Leu Thr Pro Arg Thr Pro | 115 | 120 | 125 |
| Lys Val Leu Gly Ser Gln Ala Arg Val Thr Met Leu Ala             | 130 | 135 | 140 |

&lt;210&gt; 6202

&lt;211&gt; 231

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6202

|   |    |    |    |    |
|---|----|----|----|----|
| Ile Ala Gly Thr Ala Thr Ala Arg Trp Trp Pro Ser Trp Trp Cys Ser | 1  | 5  | 10 | 15 |
| Asn Val Arg His Leu Gly Leu Lys Ser Glu Glu Ile Cys Trp Thr Asn | 20 | 25 | 30 |    |
| Ser Glu Thr Phe Ala Ala Trp Cys Ala Leu Ala Ser Gly Ser Ser Arg | 35 | 40 | 45 |    |
| Arg Glu Gly Arg Cys Arg Gln Ala Arg Ser Pro Arg Ser Ser Ser Thr | 50 | 55 | 60 |    |
| Ile Ser Arg Cys Thr Trp Glu Arg Thr Arg Ser Thr Pro Pro Gly Phe | 65 | 70 | 75 | 80 |
| Thr Ala Trp Lys Thr Ser Ser Ala Arg Ser Ala Val Ser Thr Pro Ala | 85 | 90 | 95 |    |

## 5418

Ala Ala Cys Glu Cys Ser Arg Ser Ser Pro Thr Ser Trp Thr Thr Arg  
                   100                  105                  110  
 Ser Ser Arg Leu Gly Ala Ala Gly Pro Ser Ala Ser Pro Ala Pro Arg  
                   115                  120                  125  
 Ser Leu Pro Phe Pro Ala Pro Gly Leu Arg Ser Gln Arg Phe Ser Thr  
                   130                  135                  140  
 Ser Ala Pro Pro Arg His Ala Arg Pro Pro Pro Val Ala Arg Ala Arg  
                   145                  150                  155                  160  
 Ala Ala Pro Pro His Pro Gln Ala Ser Gly Arg Lys Ser Gln Glu Leu  
                   165                  170                  175  
 Pro Gln Gly Arg Lys Gly Ala Ala Ala Ser Ala Trp Leu Thr Ala Thr  
                   180                  185                  190  
 Ala Val Val Thr Val Leu Gly Asp Pro Ala Cys Ala Phe Pro Leu Arg  
                   195                  200                  205  
 Cys Lys Pro Gly Thr Gly Lys Gly Leu Arg Gly Glu Arg Thr Trp Pro  
                   210                  215                  220  
 Ser Pro Arg Val His Gly Gln  
                   225                  230

&lt;210&gt; 6203

&lt;211&gt; 191

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (171)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (172)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (178)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 5419

&lt;221&gt; SITE

&lt;222&gt; (188)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (189)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6203

Gly Asp Pro Thr Cys Arg Gln Asn Leu Arg Cys Gly Thr Pro Gly Thr

1

5

10

15

Val Ala Ala Ala Gly Asp Cys Gly Leu Phe Ser Ala Met His Pro Leu

20

25

30

Gln Cys Val Leu Gln Val Gln Arg Ser Leu Gly Trp Gly Pro Leu Ala

35

40

45

Ser Val Ser Trp Leu Ser Leu Arg Met Cys Arg Ala His Ser Ser Leu

50

55

60

Ser Ser Thr Met Cys Pro Ser Pro Glu Arg Gln Glu Asp Gly Ala Arg

65

70

75

80

Lys Asp Phe Ser Ser Arg Leu Ala Ala Gly Pro Thr Phe Gln His Phe

85

90

95

Leu Lys Ser Ala Ser Ala Pro Gln Glu Lys Leu Ser Ser Glu Val Glu

100

105

110

Asp Pro Pro Pro Tyr Leu Met Met Asp Glu Leu Leu Gly Arg Gln Arg

115

120

125

Lys Val Tyr Leu Glu Thr Tyr Gly Cys Gln Met Asn Val Asn Asp Thr

130

135

140

Glu Ile Ala Trp Ser Ile Leu Gln Lys Ser Gly Tyr Leu Arg Thr Ser

145

150

155

160

Asn Leu Gln Glu Ala Asp Val Ile Leu Leu Xaa Xaa Ala Leu Ser Gly

165

170

175

Arg Xaa Leu Ser Arg Pro Ser Gly Thr Val Thr Xaa Xaa Lys Ala

180

185

190

&lt;210&gt; 6204

&lt;211&gt; 408

&lt;212&gt; PRT



## 5420

&lt;213&gt; Homo sapiens

&lt;400&gt; 6204

Lys Ile Met Ala His Tyr Gly Ser Ile Gln Tyr Cys Phe His Thr Cys  
 1 5 10 15  
 Thr Leu Glu Thr Lys Phe Pro Ile Ile Pro Tyr Ile Pro Thr Leu Ile  
 20 25 30  
 Thr Gln Leu Thr Gln Lys Leu Leu Ala Val Ser Lys Asn Pro Ser Lys  
 35 40 45  
 Pro His Phe Asn His Tyr Met Phe Glu Ala Ile Cys Leu Ser Ile Arg  
 50 55 60  
 Ile Thr Cys Lys Ala Asn Pro Ala Ala Val Val Asn Phe Glu Glu Ala  
 65 70 75 80  
 Leu Phe Leu Val Phe Thr Glu Ile Leu Gln Asn Asp Val Gln Glu Phe  
 85 90 95  
 Ile Pro Tyr Val Phe Gln Val Met Ser Leu Leu Leu Glu Thr His Lys  
 100 105 110  
 Asn Asp Ile Pro Ser Ser Tyr Met Ala Leu Phe Pro His Leu Leu Gln  
 115 120 125  
 Pro Val Leu Trp Glu Arg Thr Gly Asn Ile Pro Ala Leu Val Arg Leu  
 130 135 140  
 Leu Gln Ala Phe Leu Glu Arg Gly Ser Asn Thr Ile Ala Ser Ala Ala  
 145 150 155 160  
 Ala Asp Lys Ile Pro Gly Leu Leu Gly Val Phe Gln Lys Leu Ile Ala  
 165 170 175  
 Ser Lys Ala Asn Asp His Gln Gly Phe Tyr Leu Leu Asn Ser Ile Ile  
 180 185 190  
 Glu His Met Pro Pro Glu Ser Val Asp Gln Tyr Arg Lys Gln Ile Phe  
 195 200 205  
 Ile Leu Leu Phe Gln Arg Leu Gln Asn Ser Lys Thr Thr Lys Phe Ile  
 210 215 220  
 Lys Ser Phe Leu Val Phe Ile Asn Leu Tyr Cys Ile Lys Tyr Gly Ala  
 225 230 235 240  
 Leu Ala Leu Gln Glu Ile Phe Asp Gly Ile Gln Pro Lys Met Phe Gly  
 245 250 255

## 5421

Met Val Leu Glu Lys Ile Ile Ile Pro Glu Ile Gln Lys Val Ser Gly  
                   260                                  265                                  270

Asn Val Glu Lys Lys Ile Cys Ala Val Gly Ile Thr Lys Leu Leu Thr  
                   275                                  280                                  285

Glu Cys Pro Pro Met Met Asp Thr Glu Tyr Thr Lys Leu Trp Thr Pro  
                   290                                  295                                  300

Leu Leu Gln Ser Leu Ile Gly Leu Phe Glu Leu Pro Glu Asp Asp Thr  
                   305                                  310                                  315                                  320

Ile Pro Asp Glu Glu His Phe Ile Asp Ile Glu Asp Thr Pro Gly Tyr  
                                   325                                  330                                  335

Gln Thr Ala Phe Ser Gln Leu Ala Phe Ala Gly Lys Lys Glu His Asp  
                   340                                  345                                  350

Pro Val Gly Gln Met Val Asn Asn Pro Lys Ile His Leu Ala Gln Ser  
                   355                                  360                                  365

Leu His Lys Leu Ser Thr Ala Cys Pro Gly Arg Val Pro Ser Met Val  
                   370                                  375                                  380

Ser Thr Ser Leu Asn Ala Glu Ala Leu Gln Tyr Leu Gln Gly Tyr Leu  
                   385                                  390                                  395                                  400

Gln Ala Ala Ser Val Thr Leu Leu  
                                   405

<210> 6205

<211> 139

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (94)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (106)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (113)

<223> Xaa equals any of the naturally occurring L-amino acids

## 5422

&lt;400&gt; 6205

Ala Ala Ala Ser Arg Arg Pro Cys Ala Gln Arg Ser Arg Thr Ser Pro  
 1 5 10 15

Ala Ala Ala Ser Cys Arg Ser Ala Phe Gly Val Arg Arg Ala Gln Pro  
 20 25 30

Ala Ser Glu Leu Arg Gly Pro Gly Arg Val Ala Arg Met Ala Trp Ala  
 35 40 45

Gly Ser Arg Arg Val Pro Ala Gly Thr Arg Ala Ala Ala Glu Arg Cys  
 50 55 60

Cys Arg Leu Ser Leu Ser Pro Gly Ala Gln Pro Ala Arg Pro Arg Pro  
 65 70 75 80

Ser Ala Pro Pro Arg Pro Met Arg Phe Leu Thr Ser Cys Xaa Leu Leu  
 85 90 95

Leu Pro Arg Ala Ala Gln Ile Leu Ala Xaa Glu Ala Gly Leu Pro Ser  
 100 105 110

Xaa Arg Ser Phe Met Gly Phe Ala Ala Pro Phe Thr Asn Lys Arg Lys  
 115 120 125

Ala Tyr Ser Glu Arg Arg Ile Met Gly Tyr Ser  
 130 135

&lt;210&gt; 6206

&lt;211&gt; 275

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6206

Gly Gly Ala Ser Asn Phe Leu Ser Trp Arg Glu Ser Ala Arg Trp Ser  
 1 5 10 15

Arg Gln Leu Arg Arg Thr Leu Ile Arg Leu Ser Phe Pro Ile Ser Cys  
 20 25 30

Gly Arg Ser His Ala Phe Gly Gly Cys Lys Met Ala Ala Thr Ser Gly  
 35 40 45

Thr Asp Glu Pro Val Ser Gly Glu Leu Val Ser Val Ala His Ala Leu  
 50 55 60

Ser Leu Pro Ala Glu Ser Tyr Gly Asn Asp Pro Asp Ile Glu Met Ala  
 65 70 75 80

## 5423

Trp Ala Met Arg Ala Met Gln His Ala Glu Val Tyr Tyr Lys Leu Ile  
                             85                            90                            95

Ser Ser Val Asp Pro Gln Phe Leu Lys Leu Thr Lys Val Asp Asp Gln  
                             100                            105                            110

Ile Tyr Ser Glu Phe Arg Lys Asn Phe Glu Thr Leu Arg Ile Asp Val  
                             115                            120                            125

Leu Asp Pro Glu Glu Leu Lys Ser Glu Ser Ala Lys Glu Lys Trp Arg  
                             130                            135                            140

Pro Phe Cys Leu Lys Phe Asn Gly Ile Val Glu Asp Phe Asn Tyr Gly  
                             145                            150                            155                            160

Thr Leu Leu Arg Leu Asp Cys Ser Gln Gly Tyr Thr Glu Glu Asn Thr  
                             165                            170                            175

Ile Phe Ala Pro Arg Ile Gln Phe Phe Ala Ile Glu Ile Ala Arg Asn  
                             180                            185                            190

Arg Glu Gly Tyr Asn Lys Ala Val Tyr Ile Ser Val Gln Asp Lys Glu  
                             195                            200                            205

Gly Glu Lys Gly Val Asn Asn Gly Gly Glu Lys Arg Ala Asp Ser Gly  
                             210                            215                            220

Glu Glu Glu Asn Thr Lys Asn Gly Gly Glu Lys Gly Ala Asp Ser Gly  
                             225                            230                            235                            240

Glu Glu Lys Glu Glu Gly Ile Asn Arg Glu Asp Lys Thr Asp Lys Gly  
                             245                            250                            255

Gly Glu Lys Gly Lys Glu Ala Asp Lys Glu Ile Asn Lys Ser Gly Glu  
                             260                            265                            270

Lys Ala Met  
                             275

<210> 6207

<211> 87

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

5424

<220>  
 <221> SITE  
 <222> (12)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (18)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (21)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (50)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (56)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6207  
 Lys Met Leu Xaa Glu Ile Lys Ile Ile Ser Leu Xaa Val Arg Leu Asn  
     1                    5                    10                    15  
 Thr Xaa Asn Leu Xaa Pro Asn Ile Thr Tyr Gly Ser Asn Tyr Phe Leu  
                     20                    25                    30  
 Phe Cys Cys Leu Pro Ile Leu Asn Asn Ile Phe Ser Leu Asn Tyr Cys  
                     35                    40                    45  
 Lys Xaa Phe Phe Val Gly Gly Xaa Phe Tyr Leu Leu Gln Asn Asn Lys  
     50                    55                    60  
 Val Gln Thr Ile Leu Cys Leu Thr Val Ala Leu Ser Lys His Tyr Ala  
     65                    70                    75                    80  
 Trp Ile Ala Phe Glu Lys Lys  
                     85

<210> 6208  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

## 5425

&lt;400&gt; 6208

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Pro Phe Pro Ser Leu Pro Ser Ser Cys Cys Gln Gly Leu Gln Val Cys
 1             5             10             15

His Arg Pro Gly Pro Ser Leu Lys His Gly Ile Ile Ser Glu Leu Glu
      20             25             30

Val Ala Ala Ser Glu Lys Asn Pro Ser Arg Val Leu Thr Ala Glu Ile
      35             40             45

Gln Glu Leu Gly Asn Gln Pro Pro Val Cys Arg Leu Leu Ser Leu Glu
      50             55             60

Ile Leu Trp Pro Asn Leu Val Ala Val Phe Trp Asn Ser Phe Tyr Arg
      65             70             75             80

Gly Arg Gln Cys Cys Ala Phe Leu Asp Phe Arg Met Phe Gln Gly Cys
      85             90             95

Cys Trp Ile Cys Val Cys Val Cys Val Cys Val Cys Val Cys Val Cys
      100             105             110

Val Arg Ala Cys Met Cys Ala
      115

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&lt;210&gt; 6209

&lt;211&gt; 180

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6209

```

Arg Asn Met Ser Ser Phe Ser Arg Ala Pro Gln Gln Trp Ala Thr Phe
 1             5             10             15

Ala Arg Ile Trp Tyr Leu Leu Asp Gly Lys Met Gln Pro Pro Gly Lys
      20             25             30

Leu Ala Ala Met Ala Ser Ile Arg Leu Gln Gly Leu His Lys Pro Val
      35             40             45

Tyr His Ala Leu Ser Asp Cys Gly Asp His Val Val Ile Met Asn Thr
      50             55             60

Arg His Ile Ala Phe Ser Gly Asn Lys Trp Glu Gln Lys Val Tyr Ser
      65             70             75             80

Ser His Thr Gly Tyr Pro Gly Gly Phe Arg Gln Val Thr Ala Ala Gln
      85             90             95

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## 5426

Leu His Leu Arg Asp Pro Val Ala Ile Val Lys Leu Ala Ile Tyr Gly  
                   100                  105                  110  
 Met Leu Pro Lys Asn Leu His Arg Arg Thr Met Met Glu Arg Leu His  
                   115                  120                  125  
 Leu Phe Pro Asp Glu Tyr Ile Pro Glu Asp Ile Leu Lys Asn Leu Val  
                   130                  135                  140  
 Glu Glu Leu Pro Gln Pro Arg Lys Ile Pro Lys Arg Leu Asp Glu Tyr  
                   145                  150                  155                  160  
 Thr Gln Glu Glu Ile Asp Ala Phe Pro Arg Leu Trp Thr Pro Pro Glu  
                   165                  170                  175  
 Asp Tyr Arg Leu  
                   180

<210> 6210  
 <211> 86  
 <212> PRT  
 <213> Homo sapiens

<400> 6210  
 Ala Glu Leu Gly Ala Asn Gly Ser Ile Ala Val Ile Ser Gly Arg Arg  
   1                  5                  10                  15  
 Val Ser Ile Gln Val Ser Asp Ser Ser Ala Arg Leu Pro Trp Val Trp  
                   20                  25                  30  
 Glu Glu Ala Leu Pro Phe Cys Ala Val Asp Pro Ala Cys Leu Leu Trp  
                   35                  40                  45  
 Ser Pro Pro Thr Leu Ala Arg Ser Phe Thr Asn Gln Arg Arg Ala Val  
                   50                  55                  60  
 Ser Lys Ser Ser Asp Arg Met Trp Cys Lys Cys Arg Cys Thr Ser Leu  
   65                  70                  75                  80  
 Thr Leu Ser Cys Arg Ser  
                   85

<210> 6211  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens

5427

&lt;400&gt; 6211

Ile Leu Ser Asp Val Trp Ser Leu Ser Ile Gln Thr Val Asn Ile Val  
 1 5 10 15

Leu Val Phe Val Leu Ile Leu Ile Leu Leu Leu Tyr Ser Leu Arg Cys  
 20 25 30

Ala Met Gln Thr Leu Ser Asn Cys Val Trp  
 35 40

&lt;210&gt; 6212

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6212

Arg Asp Leu Ser Glu Pro Val Ala Gly Leu Phe Tyr Phe Pro Ser Leu  
 1 5 10 15

Ser Pro Ala Pro Tyr Leu Phe Ser Pro Phe Ser His Pro Arg Ser Arg  
 20 25 30

Ser His Gly Gly Ala Ser Ala Ala Thr Gln Ser His Ser Ile Ser Ser  
 35 40 45

Ser Ser Phe Gly Ala Glu Pro Ser Ala Pro Gly Gly Gly Gly Ser Pro  
 50 55 60

Gly Ala Cys Pro Ala Leu Gly Thr Lys Ser Cys Ser Ser Ser Cys Ala  
 65 70 75 80

Val His Asp Leu Ile Phe Trp Arg Asp Val Lys Lys Thr Gly Phe Val  
 85 90 95

Phe Gly Thr Thr Leu Ile Met Leu Leu Ser Leu Ala Ala Phe Ser Val  
 100 105 110

Ile Ser Val Val Ser Tyr Leu Ile Leu Ala Leu Leu Ser Val Thr Ile  
 115 120 125

Ser Phe Arg Ile Tyr Lys Ser Val Ile Gln Ala Val Gln Lys Ser Glu  
 130 135 140

Glu Gly His Pro Phe Lys Ala Tyr Leu Asp Val Asp Ile Thr Leu Ser  
 145 150 155 160

Ser Glu Ala Phe His Asn Tyr Met Asn Ala Ala Met Val His Ile Asn  
 165 170 175



## 5428

Arg Ala Leu Lys Leu Ile Ile Arg Leu Phe Leu Val Glu Asp Leu Val  
 180 185 190

Asp Ser Leu Lys Leu Ala Val Phe Met Trp Leu Met Thr Tyr Val Gly  
 195 200 205

Ala Val Phe Asn Gly Ile Thr Leu Leu Ile Leu Ala Glu Leu Leu Ile  
 210 215 220

Phe Ser Val Pro Ile Val Tyr Glu Lys Tyr Lys Thr Gln Ile Asp His  
 225 230 235 240

Tyr Val Gly Ile Ala Arg Asp Gln Thr Lys Ser Ile Val Glu Lys Ile  
 245 250 255

Gln Ala Lys Leu Pro Gly Ile Ala Lys Lys Lys Ala Glu  
 260 265

<210> 6213

<211> 206

<212> PRT

<213> Homo sapiens

<400> 6213

Pro Ala Gly Asp Asn Gly Asn Met Ala Leu Asn Gly Ala Glu Val Asp  
 1 5 10 15

Asp Phe Ser Trp Glu Pro Pro Thr Glu Ala Glu Thr Lys Val Leu Gln  
 20 25 30

Ala Arg Arg Glu Arg Gln Asp Arg Ile Ser Arg Leu Met Gly Asp Tyr  
 35 40 45

Leu Leu Arg Gly Tyr Arg Met Leu Gly Glu Thr Cys Ala Asp Cys Gly  
 50 55 60

Thr Ile Leu Leu Gln Asp Lys Gln Arg Lys Ile Tyr Cys Val Ala Cys  
 65 70 75 80

Gln Glu Leu Asp Ser Asp Val Asp Lys Asp Asn Pro Ala Leu Asn Ala  
 85 90 95

Gln Ala Ala Leu Ser Gln Ala Arg Glu His Gln Leu Ala Ser Ala Ser  
 100 105 110

Glu Leu Pro Leu Gly Ser Arg Pro Ala Pro Gln Pro Pro Val Pro Arg  
 115 120 125

## 5429

Pro Glu His Cys Glu Gly Ala Ala Ala Gly Leu Lys Ala Ala Gln Gly  
 130 135 140

Pro Pro Ala Pro Ala Val Pro Pro Asn Thr Asp Val Met Ala Cys Thr  
 145 150 155 160

Gln Thr Ala Leu Leu Gln Lys Leu Thr Trp Ala Ser Ala Glu Leu Gly  
 165 170 175

Ser Ser Thr Ser Leu Glu Thr Ser Ile Gln Leu Cys Gly Leu Ile Arg  
 180 185 190

Ala Cys Ala Glu Ala Leu Arg Ser Leu Gln Gln Leu Gln His  
 195 200 205

<210> 6214

<211> 583

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (397)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6214

Ala Ala Pro Ala Trp Ala Ala Leu Pro Leu Ser Arg Ser Leu Pro Pro  
 1 5 10 15

Cys Ser Asn Ser Ser Ser Phe Ser Met Pro Leu Phe Leu Leu Leu  
 20 25 30

Leu Val Leu Leu Leu Leu Leu Glu Asp Ala Gly Ala Gln Gln Gly Asp  
 35 40 45

Gly Cys Gly His Thr Val Leu Gly Pro Glu Ser Gly Thr Leu Thr Ser  
 50 55 60

Ile Asn Tyr Pro Gln Thr Tyr Pro Asn Ser Thr Val Cys Glu Trp Glu  
 65 70 75 80

Ile Arg Val Lys Met Gly Glu Arg Val Arg Ile Lys Phe Gly Asp Phe  
 85 90 95

Asp Ile Glu Asp Ser Asp Ser Cys His Phe Asn Tyr Leu Arg Ile Tyr  
 100 105 110

Asn Gly Ile Gly Val Ser Arg Thr Glu Ile Gly Lys Tyr Cys Gly Leu  
 115 120 125

## 5430

Gly Leu Gln Met Asn His Ser Ile Glu Ser Lys Gly Asn Glu Ile Thr  
 130 135 140  
 Leu Leu Phe Met Ser Gly Ile His Val Ser Gly Arg Gly Phe Leu Ala  
 145 150 155 160  
 Ser Tyr Ser Val Ile Asp Lys Gln Asp Leu Ile Thr Cys Leu Asp Thr  
 165 170 175  
 Ala Ser Asn Phe Leu Glu Pro Glu Phe Ser Lys Tyr Cys Pro Ala Gly  
 180 185 190  
 Cys Leu Leu Pro Phe Ala Glu Ile Ser Gly Thr Ile Pro His Gly Tyr  
 195 200 205  
 Arg Asp Ser Ser Pro Leu Cys Met Ala Gly Val His Ala Gly Val Val  
 210 215 220  
 Ser Asn Thr Leu Gly Gly Gln Ile Ser Val Val Ile Ser Lys Gly Ile  
 225 230 235 240  
 Pro Tyr Tyr Glu Ser Ser Leu Ala Asn Asn Val Thr Ser Val Val Gly  
 245 250 255  
 His Leu Ser Thr Ser Leu Phe Thr Phe Lys Thr Ser Gly Cys Tyr Gly  
 260 265 270  
 Thr Leu Gly Met Glu Ser Gly Val Ile Ala Asp Pro Gln Ile Thr Ala  
 275 280 285  
 Ser Ser Val Leu Glu Trp Thr Asp His Thr Gly Gln Glu Asn Ser Trp  
 290 295 300  
 Lys Pro Lys Lys Ala Arg Leu Lys Lys Pro Gly Pro Pro Trp Ala Ala  
 305 310 315 320  
 Phe Ala Thr Asp Glu Tyr Gln Trp Leu Gln Ile Asp Leu Asn Lys Glu  
 325 330 335  
 Lys Lys Ile Thr Gly Ile Ile Thr Thr Gly Ile Thr Met Val Glu His  
 340 345 350  
 Asn Tyr Tyr Val Ser Ala Tyr Arg Ile Leu Tyr Ser Asp Asp Gly Gln  
 355 360 365  
 Lys Trp Thr Val Tyr Arg Glu Pro Gly Val Glu Gln Asp Lys Ile Phe  
 370 375 380  
 Gln Gly Asn Lys Asp Tyr His Gln Asp Val Arg Asn Xaa Phe Leu Pro  
 385 390 395 400

## 5431

Pro Ile Ile Ala Arg Phe Ile Arg Val Asn Pro Thr Gln Trp Gln Gln  
                             405                            410                            415  
 Lys Ile Ala Met Lys Met Glu Leu Leu Gly Cys Gln Phe Ile Pro Lys  
                             420                            425                            430  
 Gly Arg Pro Pro Lys Leu Thr Gln Pro Pro Pro Pro Arg Asn Ser Asn  
                             435                            440                            445  
 Asp Leu Lys Asn Thr Thr Ala Pro Pro Lys Ile Ala Lys Gly Arg Ala  
                             450                            455                            460  
 Pro Lys Phe Thr Gln Pro Leu Gln Pro Arg Ser Ser Asn Glu Phe Pro  
 465                            470                            475                            480  
 Ala Gln Thr Glu Gln Thr Thr Ala Ser Pro Asp Ile Arg Asn Thr Thr  
                             485                            490                            495  
 Val Thr Pro Asn Val Thr Lys Asp Val Ala Leu Ala Ala Val Leu Val  
                             500                            505                            510  
 Pro Val Leu Val Met Val Leu Thr Thr Leu Ile Leu Ile Leu Val Cys  
                             515                            520                            525  
 Ala Trp His Trp Arg Asn Arg Lys Lys Lys Thr Glu Gly Thr Tyr Asp  
                             530                            535                            540  
 Leu Pro Tyr Trp Asp Arg Ala Gly Asn Ser Arg Gly Leu Cys Ile Ser  
 545                            550                            555                            560  
 Phe Leu Ser Glu Gly Cys Arg Ser Pro Thr Gly Gly Ser Ser Glu Lys  
                             565                            570                            575  
 Arg Val Ile Leu Trp Pro Arg  
                             580

&lt;210&gt; 6215

&lt;211&gt; 167

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (12)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

## 5432

&lt;222&gt; (17)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (143)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (158)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (163)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6215

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Arg | Gly | His | Thr | Trp | Ala | Tyr | Ser | Gly | Xaa | Ala | Glu | Pro | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Arg | Leu | Arg | Ala | Ser | Leu | Thr | Leu | Ser | Arg | Glu | Ala | Gln | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ala | Leu | Ala | Arg | Glu | Val | Val | Tyr | Leu | Glu | Ser | Ser | Thr | Thr | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | His | Ala | Leu | Leu | Ala | Pro | Ala | Cys | Leu | Ala | Gly | Thr | Trp | Ala | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Gly | Ala | Lys | Tyr | Thr | Leu | Gly | Leu | His | Ala | Gly | Pro | Met | Asn |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Ala | Ala | Phe | Ser | Leu | Val | Ala | Ala | Val | Ala | Gly | Phe | Val | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ala | Phe | Ser | Gln | Asp | Ser | Leu | Thr | His | Ala | Val | Glu | Ser | Trp | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Arg | Arg | Thr | Ala | Ser | Leu | Ser | Ala | Ala | Tyr | Ala | Cys | Gly | Gly | Val |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Phe | Tyr | Glu | Lys | Leu | Leu | Ser | Gly | Asn | Leu | Ala | Leu | Arg | Xaa | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gly | Gln | Lys | Lys | Gly | Glu | Lys | Leu | Tyr | Thr | Pro | Asn | Xaa | Glu | His |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Xaa | Asp | Thr | Cys | Ser |
|     |     |     |     | 165 |     |     |

5433

&lt;210&gt; 6216

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6216

Gln Gly Leu Pro Ser Met Lys Tyr Leu Thr Phe Ser His Pro Leu Lys  
1 5 10 15

Asn Ile His Phe Tyr Lys Met Lys Thr Ile Ile Asn Val Leu Asn Ile  
20 25 30

Lys Lys Asn Asn Asn Leu Gln Arg Lys Ile Asn Gly Asp Ser Tyr Leu  
35 40 45

Pro Cys Thr Phe Ser Thr Ile Val Ala Ala Ser Cys Thr His Leu  
50 55 60

&lt;210&gt; 6217

&lt;211&gt; 521

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (84)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (93)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (94)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6217

Ala Asp Tyr Leu Leu Ser Arg Met Asp Val Thr Ser Cys Ile Ser Tyr  
1 5 10 15

Arg Asn Phe Ala Ser Cys Met Gly Asp Ser Arg Leu Leu Asn Lys Val  
20 25 30

Asp Ala Tyr Ile Gln Glu His Leu Leu Gln Ile Ser Glu Glu Glu Glu

## 5434

| 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Leu | Lys | Leu | Pro | Arg | Leu | Lys | Leu | Glu | Val | Met | Leu | Glu | Asp | Asn |
| 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Val | Cys | Leu | Pro | Ser | Asn | Gly | Lys | Leu | Tyr | Thr | Lys | Val | Ile | Asn | Trp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Val | Gln | Arg | Xaa | Ile | Trp | Glu | Asn | Gly | Asp | Ser | Leu | Xaa | Xaa | Leu | Met |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Glu | Glu | Val | Gln | Thr | Leu | Tyr | Tyr | Ser | Ala | Asp | His | Lys | Leu | Leu | Asp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Asn | Leu | Leu | Asp | Gly | Gln | Ala | Glu | Val | Phe | Gly | Ser | Asp | Asp | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| His | Ile | Gln | Phe | Val | Gln | Lys | Lys | Pro | Pro | Arg | Glu | Asn | Gly | His | Lys |
|     |     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Gln | Ile | Ser | Ser | Ser | Ser | Thr | Gly | Cys | Leu | Ser | Ser | Pro | Asn | Ala | Thr |
| 145 |     |     |     |     |     |     | 150 |     |     |     |     | 155 |     |     | 160 |
| Val | Gln | Ser | Pro | Lys | His | Glu | Trp | Lys | Ile | Val | Ala | Ser | Glu | Lys | Thr |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ser | Asn | Asn | Thr | Tyr | Leu | Cys | Leu | Ala | Val | Leu | Asp | Gly | Ile | Phe | Cys |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Val | Ile | Phe | Leu | His | Gly | Arg | Asn | Ser | Pro | Gln | Ser | Ser | Pro | Thr | Ser |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Thr | Pro | Lys | Leu | Ser | Lys | Ser | Leu | Ser | Phe | Glu | Met | Gln | Gln | Asp | Glu |
|     |     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |
| Leu | Ile | Glu | Lys | Pro | Met | Ser | Pro | Met | Gln | Tyr | Ala | Arg | Ser | Gly | Leu |
| 225 |     |     |     |     |     |     | 230 |     |     |     |     | 235 |     |     | 240 |
| Gly | Thr | Ala | Glu | Met | Asn | Gly | Lys | Leu | Ile | Ala | Ala | Gly | Gly | Tyr | Asn |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Arg | Glu | Glu | Cys | Leu | Arg | Thr | Val | Glu | Cys | Tyr | Asn | Pro | His | Thr | Asp |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| His | Trp | Ser | Phe | Leu | Ala | Pro | Met | Arg | Thr | Pro | Arg | Ala | Arg | Phe | Gln |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Met | Ala | Val | Leu | Met | Gly | Gln | Leu | Tyr | Val | Val | Gly | Gly | Ser | Asn | Gly |
|     | 290 |     |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |
| His | Ser | Asp | Asp | Leu | Ser | Cys | Gly | Glu | Met | Tyr | Asp | Ser | Asn | Ile | Asp |

## 5435

|   |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|
| 305   |     | 310 |     | 315 |     | 320 |
| Asp Trp Ile Pro Val Pro Glu Leu Arg Thr Asn Arg Cys Asn Ala Gly |     |     |     |     |     |     |
|   | 325 |     | 330 |     | 335 |     |
| Val Cys Ala Leu Asn Gly Lys Leu Tyr Ile Val Gly Gly Ser Asp Pro |     |     |     |     |     |     |
|   | 340 |     | 345 |     | 350 |     |
| Tyr Gly Gln Lys Gly Leu Lys Asn Cys Asp Val Phe Asp Pro Val Thr |     |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |     |
| Lys Leu Trp Thr Ser Cys Ala Pro Leu Asn Ile Arg Arg His Gln Ser |     |     |     |     |     |     |
|   | 370 |     | 375 |     | 380 |     |
| Ala Val Cys Glu Leu Gly Gly Tyr Leu Tyr Ile Ile Gly Gly Ala Glu |     |     |     |     |     |     |
| 385   |     | 390 |     | 395 |     | 400 |
| Ser Trp Asn Cys Leu Asn Thr Val Glu Arg Tyr Asn Pro Glu Asn Asn |     |     |     |     |     |     |
|   | 405 |     | 410 |     | 415 |     |
| Thr Trp Thr Leu Ile Ala Pro Met Asn Val Ala Arg Arg Gly Ala Gly |     |     |     |     |     |     |
|   | 420 |     | 425 |     | 430 |     |
| Val Ala Val Leu Asn Gly Lys Leu Phe Val Cys Gly Gly Phe Asp Gly |     |     |     |     |     |     |
|   | 435 |     | 440 |     | 445 |     |
| Ser His Ala Ile Ser Cys Val Glu Met Tyr Asp Pro Thr Arg Asn Glu |     |     |     |     |     |     |
|   | 450 |     | 455 |     | 460 |     |
| Trp Lys Met Met Gly Asn Met Thr Ser Pro Arg Ser Asn Ala Gly Ile |     |     |     |     |     |     |
| 465   |     | 470 |     | 475 |     | 480 |
| Ala Thr Val Gly Asn Thr Ile Tyr Ala Val Gly Gly Phe Asp Gly Asn |     |     |     |     |     |     |
|   | 485 |     | 490 |     | 495 |     |
| Glu Phe Leu Asn Thr Val Glu Val Tyr Asn Leu Glu Ser Asn Glu Trp |     |     |     |     |     |     |
|   | 500 |     | 505 |     | 510 |     |
| Ser Pro Tyr Thr Lys Ile Phe Gln Phe                             |     |     |     |     |     |     |
|   | 515 |     | 520 |     |     |     |

&lt;210&gt; 6218

&lt;211&gt; 425

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (14)



## 5436

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (16)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 6218

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Trp | Ser | Leu | Met | Leu | Leu | Gly | Asp | Met | Arg | Leu | Xaa | Phe | Xaa |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Val | Glu | Asp | Glu | Leu | Ser | Ser | Pro | Val | Val | Val | Phe | Arg | Phe | Phe |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Glu | Leu | Pro | Gly | Ser | Asp | Pro | Val | Phe | Lys | Ala | Val | Pro | Val | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Met | Thr | Pro | Ser | Gly | Val | Gly | Arg | Glu | Arg | His | Ser | Cys | Asp | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Arg | Trp | Leu | Gly | Glu | Gln | Leu | Lys | Gln | Leu | Val | Pro | Ala | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Thr | Val | Met | Asp | Leu | Glu | Ala | Glu | Gly | Thr | Cys | Leu | Arg | Phe |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Leu | Met | Thr | Ala | Ala | Val | Leu | Gly | Thr | Arg | Gly | Glu | Asp | Val |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Gln | Leu | Val | Ala | Cys | Ile | Glu | Ser | Lys | Leu | Pro | Val | Leu | Cys | Cys |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Gln | Leu | Arg | Glu | Glu | Phe | Lys | Gln | Glu | Val | Glu | Ala | Thr | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Leu | Tyr | Val | Asp | Asp | Pro | Asn | Trp | Ser | Gly | Ile | Gly | Val | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Tyr | Glu | His | Ala | Asn | Asp | Asp | Lys | Ser | Ser | Leu | Lys | Ser | Asp | Pro |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gly | Glu | Asn | Ile | His | Ala | Gly | Leu | Leu | Lys | Lys | Leu | Asn | Glu | Leu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ser | Asp | Leu | Thr | Phe | Lys | Ile | Gly | Pro | Glu | Tyr | Lys | Ser | Met | Lys |
|     |     | 195 |     |     |     |     |     | 200 |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Cys | Leu | Tyr | Val | Gly | Met | Ala | Ser | Asp | Asn | Val | Asp | Ala | Ala | Glu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Glu | Thr | Ile | Ala | Ala | Thr | Ala | Arg | Glu | Ile | Glu | Glu | Asn | Ser |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

## 5437

|   |     |     |     |
|---|-----|-----|-----|
| 225   | 230 | 235 | 240 |
| Arg Leu Leu Glu Asn Met Thr Glu Val Val Arg Lys Gly Ile Gln Glu | 245 | 250 | 255 |
| Ala Gln Val Glu Leu Gln Lys Ala Ser Glu Glu Arg Leu Leu Glu Glu | 260 | 265 | 270 |
| Gly Val Leu Arg Gln Ile Pro Val Val Gly Ser Val Leu Asn Trp Phe | 275 | 280 | 285 |
| Ser Pro Val Gln Ala Leu Gln Lys Gly Arg Thr Phe Asn Leu Thr Ala | 290 | 295 | 300 |
| Gly Ser Leu Glu Ser Thr Glu Pro Ile Tyr Val Tyr Lys Ala Gln Gly | 305 | 310 | 315 |
| Ala Gly Val Thr Leu Pro Pro Thr Pro Ser Gly Ser Arg Thr Lys Gln | 325 | 330 | 335 |
| Arg Leu Pro Gly Gln Lys Pro Phe Lys Arg Ser Leu Arg Gly Ser Asp | 340 | 345 | 350 |
| Ala Leu Ser Glu Thr Ser Ser Val Ser His Ile Glu Asp Leu Glu Lys | 355 | 360 | 365 |
| Val Glu Arg Leu Ser Ser Gly Pro Glu Gln Ile Thr Leu Glu Ala Ser | 370 | 375 | 380 |
| Ser Thr Glu Gly His Pro Gly Ala Pro Ser Pro Gln His Thr Asp Gln | 385 | 390 | 395 |
| Thr Glu Ala Phe Gln Lys Gly Val Pro His Pro Glu Asp Asp His Ser | 405 | 410 | 415 |
| Gln Val Glu Gly Pro Glu Ser Leu Arg                             | 420 | 425 |     |

&lt;210&gt; 6219

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (22)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

## 5438

&lt;221&gt; SITE

&lt;222&gt; (45)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (54)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (60)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (77)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6219

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Lys | Glu | Ala | Ala | Leu | Gln | Trp | His | Ser | Trp | Val | Trp | Cys | Thr | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Glu | His | Leu | Xaa | Phe | Cys | Leu | Ile | Asn | Ala | Gly | Val | Leu | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Phe | Ser | Asn | Tyr | Leu | Gln | Ile | Asp | Glu | Glu | Xaa | Tyr | Gly | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Trp | Glu | Leu | Thr | Xaa | Glu | Gly | Phe | Met | Thr | Xaa | Phe | Ala | Leu | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Leu | Asp | His | Leu | Leu | His | Cys | His | Pro | Leu | Xaa | Leu | Met | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ser | Ser | Gln | Cys | Ser | Leu | Ser | Ser | Pro | Lys | Asp | Pro | Leu | Gly | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | His | Arg | Asn | Leu | Asp | Arg | Trp | Gly | Thr | Gln | Pro | Leu | Gly | Asn | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Pro | Cys | Phe | Arg | Asp | Arg | Glu | Ser | Val | Cys | Trp | Gly | Ile | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |
|-----|-----|
| Val | Phe |
| 130 |     |

&lt;210&gt; 6220

&lt;211&gt; 150

## 5439

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6220

```

Thr Pro Thr Pro Phe Gly Ser Ala Arg Ala Pro Gln Ala Arg Pro Gly
 1              5              10              15

Arg Arg Asp Gly Arg Met Ser Gly Gly Arg Arg Lys Glu Glu Pro Pro
      20              25              30

Gln Pro Gln Leu Ala Asn Gly Ala Leu Lys Val Ser Val Trp Ser Lys
      35              40              45

Val Leu Arg Ser Asp Ala Ala Trp Glu Asp Lys Asp Glu Phe Leu Asp
      50              55              60

Val Ile Tyr Trp Phe Arg Gln Ile Ile Ala Val Val Leu Gly Val Ile
      65              70              75              80

Trp Gly Val Leu Pro Leu Arg Gly Phe Leu Gly Ile Ala Gly Phe Cys
      85              90              95

Leu Ile Asn Ala Gly Val Leu Tyr Leu Tyr Phe Ser Asn Tyr Leu Gln
      100             105             110

Ile Asp Glu Glu Glu Tyr Gly Gly Thr Trp Glu Leu Thr Lys Glu Gly
      115             120             125

Phe Met Thr Ser Phe Ala Leu Phe Met Val Ile Trp Ile Ile Phe Tyr
      130             135             140

Thr Ala Ile His Tyr Asp
145              150

```

&lt;210&gt; 6221

&lt;211&gt; 782

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6221

```

Trp Ser Ala Ala Ala Ala Ala Ala Ala Ala Gln Ser Arg Trp Trp
 1              5              10              15

Ser Arg Arg Gly Gly Ser Arg Ser Thr Met Pro Ala Leu Pro Leu Asp
      20              25              30

Gln Leu Gln Ile Thr His Lys Asp Pro Lys Thr Gly Lys Leu Arg Thr
      35              40              45

```

## 5440

Ser Pro Ala Leu His Pro Glu Gln Lys Ala Asp Arg Tyr Phe Val Leu  
 50 55 60  
 Tyr Lys Pro Pro Pro Lys Asp Asn Ile Pro Ala Leu Val Glu Glu Tyr  
 65 70 75 80  
 Leu Glu Arg Ala Thr Phe Val Ala Asn Asp Leu Asp Trp Leu Leu Ala  
 85 90 95  
 Leu Pro His Asp Lys Phe Trp Cys Gln Val Ile Phe Asp Glu Thr Leu  
 100 105 110  
 Gln Lys Cys Leu Asp Ser Tyr Leu Arg Tyr Val Pro Arg Lys Phe Asp  
 115 120 125  
 Glu Gly Val Ala Ser Ala Pro Glu Val Val Asp Met Gln Lys Arg Leu  
 130 135 140  
 His Arg Ser Val Phe Leu Thr Phe Leu Arg Met Ser Thr His Lys Glu  
 145 150 155 160  
 Ser Lys Asp His Phe Ile Ser Pro Ser Ala Phe Gly Glu Ile Leu Tyr  
 165 170 175  
 Asn Asn Phe Leu Phe Asp Ile Pro Lys Ile Leu Asp Leu Cys Val Leu  
 180 185 190  
 Phe Gly Lys Gly Asn Ser Pro Leu Leu Gln Lys Met Ile Gly Asn Ile  
 195 200 205  
 Phe Thr Gln Gln Pro Ser Tyr Tyr Ser Asp Leu Asp Glu Thr Leu Pro  
 210 215 220  
 Thr Ile Leu Gln Val Phe Ser Asn Ile Leu Gln His Cys Gly Leu Gln  
 225 230 235 240  
 Gly Asp Gly Ala Asn Thr Thr Pro Gln Lys Leu Glu Glu Arg Gly Arg  
 245 250 255  
 Leu Thr Pro Ser Asp Met Pro Leu Leu Glu Leu Lys Asp Ile Val Leu  
 260 265 270  
 Tyr Leu Cys Asp Thr Cys Thr Thr Leu Trp Ala Phe Leu Asp Ile Phe  
 275 280 285  
 Pro Leu Ala Cys Gln Thr Phe Gln Lys His Asp Phe Cys Tyr Arg Leu  
 290 295 300  
 Ala Ser Phe Tyr Glu Ala Ala Ile Pro Glu Met Glu Ser Ala Ile Lys  
 305 310 315 320

## 5441

Lys Arg Arg Leu Glu Asp Ser Lys Leu Leu Gly Asp Leu Trp Gln Arg  
 325 330 335  
 Leu Ser His Ser Arg Lys Lys Leu Met Glu Ile Phe His Ile Ile Leu  
 340 345 350  
 Asn Gln Ile Cys Leu Leu Pro Ile Leu Glu Ser Ser Cys Asp Asn Ile  
 355 360 365  
 Gln Gly Phe Ile Glu Glu Phe Leu Gln Ile Phe Ser Ser Leu Leu Gln  
 370 375 380  
 Glu Lys Arg Phe Leu Arg Asp Tyr Asp Ala Leu Phe Pro Val Ala Glu  
 385 390 395 400  
 Asp Ile Ser Leu Leu Gln Gln Ala Ser Ser Val Leu Asp Glu Thr Arg  
 405 410 415  
 Thr Ala Tyr Ile Leu Gln Ala Val Glu Ser Ala Trp Glu Gly Val Asp  
 420 425 430  
 Arg Arg Lys Ala Thr Asp Ala Lys Asp Pro Ser Val Ile Glu Glu Pro  
 435 440 445  
 Asn Gly Glu Pro Asn Gly Val Thr Val Thr Ala Glu Ala Val Ser Gln  
 450 455 460  
 Ala Ser Ser His Pro Glu Asn Ser Glu Glu Glu Glu Cys Met Gly Ala  
 465 470 475 480  
 Ala Ala Ala Val Gly Pro Ala Met Cys Gly Val Glu Leu Asp Ser Leu  
 485 490 495  
 Ile Ser Gln Val Lys Asp Leu Leu Pro Asp Leu Gly Glu Gly Phe Ile  
 500 505 510  
 Leu Ala Cys Leu Glu Tyr Tyr His Tyr Asp Pro Glu Gln Val Ile Asn  
 515 520 525  
 Asn Ile Leu Glu Glu Arg Leu Ala Pro Thr Leu Ser Gln Leu Asp Arg  
 530 535 540  
 Asn Leu Asp Arg Glu Met Lys Pro Asp Pro Thr Pro Leu Leu Thr Ser  
 545 550 555 560  
 Arg His Asn Val Phe Gln Asn Asp Glu Phe Asp Val Phe Ser Arg Asp  
 565 570 575  
 Ser Val Asp Leu Ser Arg Val His Lys Gly Lys Ser Thr Arg Lys Glu  
 580 585 590

## 5442

Glu Asn Thr Arg Ser Leu Leu Asn Asp Lys Arg Ala Val Ala Ala Gln  
 595 600 605  
 Arg Gln Arg Tyr Glu Gln Tyr Ser Val Val Val Glu Glu Val Pro Leu  
 610 615 620  
 Gln Pro Gly Glu Ser Leu Pro Tyr His Ser Val Tyr Tyr Glu Asp Glu  
 625 630 635 640  
 Tyr Asp Asp Thr Tyr Asp Gly Asn Gln Val Gly Ala Asn Asp Ala Asp  
 645 650 655  
 Ser Asp Asp Glu Leu Ile Ser Arg Arg Pro Phe Thr Ile Pro Gln Val  
 660 665 670  
 Leu Arg Thr Lys Val Pro Arg Glu Gly Gln Glu Glu Asp Asp Asp Asp  
 675 680 685  
 Glu Glu Asp Asp Ala Asp Glu Glu Ala Pro Lys Pro Asp His Phe Val  
 690 695 700  
 Gln Asp Pro Ala Val Leu Arg Glu Lys Ala Glu Ala Arg Arg Met Ala  
 705 710 715 720  
 Phe Leu Ala Lys Lys Gly Tyr Arg His Asp Ser Ser Thr Ala Val Ala  
 725 730 735  
 Gly Ser Pro Arg Gly His Gly Gln Ser Arg Glu Thr Thr Gln Glu Arg  
 740 745 750  
 Arg Lys Lys Glu Ala Asn Lys Ala Thr Arg Ala Asn His Asn Arg Arg  
 755 760 765  
 Thr Met Ala Asp Arg Lys Arg Ser Lys Gly Met Ile Pro Ser  
 770 775 780

&lt;210&gt; 6222

&lt;211&gt; 345

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6222

Ile Arg His Glu Pro Gly Ser Thr Gln Ser Lys Thr Leu Met Ala Ala  
 1 5 10 15

Val Phe Leu Val Thr Leu Tyr Glu Tyr Ser Pro Leu Phe Tyr Ile Ala  
 20 25 30

Val Val Phe Thr Cys Phe Ile Val Thr Thr Gly Leu Val Leu Gly Trp

## 5443

|   |   |                 |     |
|---|---|-----------------|-----|
| 35  | 40  | 45              |     |
| Phe Gly Trp Asp Val   | Pro Val Ile Leu Arg Asn Ser                 | Glu Glu Thr Gln |     |
| 50  | 55  | 60              |     |
| Phe Ser Thr Arg Val   | Phe Lys Lys Gln Met Arg Gln Val Lys Asn Pro |                 |     |
| 65  | 70  | 75              | 80  |
| Phe Gly Leu Glu Ile Thr Asn Pro Ser Ser Ala Ser Ile Thr Thr Gly |   |                 |     |
| 85  | 90  | 95              |     |
| Ile Thr Leu Thr Thr Asp Cys Leu Glu Asp Ser Leu Leu Thr Cys Tyr |   |                 |     |
| 100   | 105   | 110             |     |
| Trp Gly Cys Ser Val Gln Lys Leu Tyr Glu Ala Leu Gln Lys His Val |   |                 |     |
| 115   | 120   | 125             |     |
| Tyr Cys Phe Arg Ile Ser Thr Pro Gln Ala Leu Glu Asp Ala Leu Tyr |   |                 |     |
| 130   | 135   | 140             |     |
| Ser Glu Tyr Leu Tyr Gln Glu Gln Tyr Phe Ile Lys Lys Asp Ser Lys |   |                 |     |
| 145   | 150   | 155             | 160 |
| Glu Glu Ile Tyr Cys Gln Leu Pro Arg Asp Thr Lys Ile Glu Asp Phe |   |                 |     |
| 165   | 170   | 175             |     |
| Gly Thr Val Pro Arg Ser Arg Tyr Pro Leu Val Ala Leu Leu Thr Leu |   |                 |     |
| 180   | 185   | 190             |     |
| Ala Asp Glu Asp Asp Arg Glu Ile Tyr Asp Ile Ile Ser Met Val Ser |   |                 |     |
| 195   | 200   | 205             |     |
| Val Ile His Ile Pro Asp Arg Thr Tyr Lys Leu Ser Cys Arg Ile Leu |   |                 |     |
| 210   | 215   | 220             |     |
| Tyr Gln Tyr Leu Leu Leu Ala Gln Gly Gln Phe His Asp Leu Lys Gln |   |                 |     |
| 225   | 230   | 235             | 240 |
| Leu Phe Met Ser Ala Asn Asn Asn Phe Thr Pro Ser Asn Asn Ser Ser |   |                 |     |
| 245   | 250   | 255             |     |
| Ser Glu Glu Lys Asn Thr Asp Arg Ser Leu Leu Glu Lys Val Gly Leu |   |                 |     |
| 260   | 265   | 270             |     |
| Ser Glu Ser Glu Val Glu Pro Ser Glu Glu Asn Ser Lys Asp Cys Val |   |                 |     |
| 275   | 280   | 285             |     |
| Val Cys Gln Asn Gly Thr Val Asn Trp Val Leu Leu Pro Cys Arg His |   |                 |     |
| 290   | 295   | 300             |     |
| Thr Cys Leu Cys Asp Gly Cys Val Lys Tyr Phe Gln Gln Cys Pro Met |   |                 |     |



305                      310                      315                      320

Cys Arg Gln Phe Val Gln Glu Ser Phe Ala Leu Cys Ser Gln Lys Glu  
                                325                      330                      335

Gln Asp Lys Asp Lys Pro Lys Thr Leu  
                                340                      345

```

<400> 6223
Arg Ser Pro Thr Glu Thr Leu Phe Cys Lys Glu Pro Thr Ser Arg Ala
  1          5          10          15
Ala Ala Ala Arg Glu Glu Ser Thr Cys Ser Ser Arg Leu Thr Val Arg
          20          25          30
Leu Ser Ser Ala Leu Ala Gly Glu Gly Pro Gln Ala Ser Pro Thr Ala
          35          40          45
Thr Glu Arg Ala Ser Leu Gln Gly Asn His Ile Arg His Ala Cys Ala
          50          55          60
His Ser Arg Leu Lys Thr Ala Ser Lys Met Ser Met Lys Pro Leu Ser
  65          70          75          80
Ser Arg Ala Val Ser Phe Asn Thr Ser Glu Tyr Tyr Leu Trp Leu Lys
          85          90          95
Gly Cys Met Cys Ile Gly Val Cys Val Cys Val Cys Val Cys Val Phe
          100          105          110
Gly Leu Val Trp Arg Met Lys Lys Gly Phe His Leu Gly Ile Cys Lys
          115          120          125
Tyr Ser Met Ala Ser
          130

```

 $\langle 220 \rangle$

## 5445

&lt;221&gt; SITE

&lt;222&gt; (108)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6224

Gly Thr Ala Glu Glu Leu Lys Arg Asn Ala Glu Thr Gly Asn Leu Pro  
 1 5 10 15

His Ser Tyr Arg Leu Ile Ser Val Val Ser His Ile Gly Ser Thr Ser  
 20 25 30

Ser Ser Gly His Tyr Ile Ser Asp Val Tyr Asp Ile Lys Lys Gln Ala  
 35 40 45

Trp Phe Thr Tyr Asn Asp Leu Glu Val Ser Lys Ile Gln Glu Ala Ala  
 50 55 60

Val Gln Ser Asp Arg Asp Arg Ser Gly Tyr Ile Phe Phe Tyr Met His  
 65 70 75 80

Lys Glu Ile Phe Asp Glu Leu Leu Glu Thr Glu Lys Asn Ser Gln Ser  
 85 90 95

Leu Ser Thr Glu Val Gly Lys Thr Thr Arg Gln Xaa Ser  
 100 105

&lt;210&gt; 6225

&lt;211&gt; 219

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6225

Pro Gly Ala Ala Trp Ser Arg Pro Asp Leu Arg Gly Cys Cys Thr Gly  
 1 5 10 15

Pro Gln Pro Ala Leu Arg Met Leu Val Leu Pro Ser Pro Cys Pro Gln  
 20 25 30

Pro Leu Ala Phe Ser Ser Val Glu Thr Met Glu Gly Pro Pro Arg Arg  
 35 40 45

Thr Cys Arg Ser Pro Glu Pro Gly Pro Ser Ser Ser Ile Gly Ser Pro  
 50 55 60

Gln Ala Ser Ser Pro Pro Arg Pro Asn His Tyr Leu Leu Ile Asp Thr  
 65 70 75 80

Gln Gly Val Pro Tyr Thr Val Leu Val Asp Glu Glu Ser Gln Arg Glu  
 85 90 95

## 5446

Pro Gly Ala Ser Gly Ala Pro Gly Gln Lys Lys Cys Tyr Ser Cys Pro  
 100 105 110

Val Cys Ser Arg Val Phe Glu Tyr Met Ser Tyr Leu Gln Arg His Ser  
 115 120 125

Ile Thr His Ser Glu Val Lys Pro Phe Glu Cys Asp Ile Cys Gly Lys  
 130 135 140

Ala Phe Lys Arg Ala Ser His Leu Ala Arg His His Ser Ile His Leu  
 145 150 155 160

Ala Gly Gly Gly Arg Pro His Gly Cys Pro Leu Cys Pro Arg Arg Phe  
 165 170 175

Arg Asp Ala Gly Glu Leu Ala Gln His Ser Arg Val His Ser Gly Glu  
 180 185 190

Arg Pro Phe Gln Cys Pro His Cys Pro Arg Arg Phe Met Glu Gln Asn  
 195 200 205

Thr Leu Gln Lys His Thr Arg Trp Lys His Pro  
 210 215

<210> 6226

<211> 163

<212> PRT

<213> Homo sapiens

<400> 6226

Val Tyr Leu Phe Ile Tyr Phe Arg Asn Lys Ser Leu Gly Asp Lys Ser  
 1 5 10 15

Glu Thr Leu Ser Pro Lys Lys Lys Lys Lys Lys Lys Asn Trp Ile  
 20 25 30

Ala Trp Leu Tyr Ser Gly His Ser Met Gln Ala Gln Phe Cys Cys Ser  
 35 40 45

Ala Val Cys Ser Ala Phe Leu His Ile Leu Ala Ser Pro Ser Gly Ala  
 50 55 60

Lys Met Ala Ala Ala Phe Gln Ala Ser His Pro Asp Ser Asp Pro Glu  
 65 70 75 80

Lys Leu Pro Ile Pro Thr Trp Val Ser Leu Cys Arg Asn Glu Lys Pro  
 85 90 95

## 5447

His Pro Ala Ala Glu Thr Ser Pro Ser Ser Val Phe Ser Gly Leu Ile  
100 105 110

His Gln Arg Arg Pro Pro Leu Asn Gln Ser Leu Ala Lys Arg Met Gly  
115 120 125

Pro Pro Gly Arg Leu Asp Gln Thr Gly Pro Ala Leu Trp Gly Trp Gly  
130 135 140

Glu Ala Gln Met Lys Ala Ala Gly Gln Asp Gly Leu Leu Asp Leu Cys  
145 150 155 160

Tyr Gln Gln

<210> 6227

<211> 185

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (90)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (94)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (142)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (143)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (155)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (168)

<223> Xaa equals any of the naturally occurring L-amino acids

## 5448

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (178)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6227

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Arg | Arg | Lys | Gly | Lys | Asp | Arg | Val | Arg | Gln | Gly | Ala | Trp | Gly | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Met | Val | Pro | Met | His | Leu | Leu | Gly | Arg | Leu | Glu | Lys | Pro | Leu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Cys | Cys | Ala | Ser | Phe | Leu | Leu | Gly | Leu | Ala | Leu | Leu | Gly | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Thr | Asp | Ile | Thr | Pro | Val | Ala | Tyr | Phe | Phe | Leu | Thr | Leu | Gly | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Leu | Phe | Ala | Tyr | Leu | Leu | Val | Arg | Phe | Leu | Glu | Trp | Gly | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Gln | Leu | Gln | Ser | Met | Gln | Thr | Xaa | Ser | Pro | Gly | Xaa | Ser | Gly |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ala | Arg | Asp | Asn | Glu | Ala | Phe | Glu | Val | Pro | Val | Tyr | Glu | Glu | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Val | Gly | Leu | Glu | Ser | Gln | Cys | Arg | Pro | Lys | Ser | Trp | Thr | Asn | His |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Thr | Ala | Thr | Gly | Gly | Asp | Thr | Pro | Ser | Thr | Leu | Xaa | Xaa | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Pro | Ser | Pro | Phe | Gln | Lys | Gly | Ser | Arg | Xaa | Lys | Pro | Lys | Leu | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Glu | Ala | Glu | Trp | Ala | Leu | Xaa | Gly | Gly | Pro | Met | Gly | Pro | Arg | Lys |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Xaa | Pro | Trp | Glu | Glu | Leu | Pro | Asn |
|     |     | 180 |     |     |     |     |     | 185 |

&lt;210&gt; 6228

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 5449

<221> SITE  
 <222> (13)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (38)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (41)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (52)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (57)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 6228  
 Val Leu Leu Ser Gln Leu Gln Arg Ala Gly Ala Arg Xaa Pro Ser Gly  
           1                  5                  10                  15  
 Leu Pro Gly Ala Pro Gly Thr Ala Leu His His Pro Pro Arg Glu Gly  
                   20                  25                  30  
 Asp Ser Glu Ala Gln Xaa Gly Pro Xaa Pro Thr Glu Pro Thr Pro Pro  
           35                  40                  45  
 Tyr Ser Ser Xaa Leu Lys Asn Ile Xaa Gly  
           50                  55

<210> 6229  
 <211> 231  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (20)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE

## 5450

&lt;222&gt; (24)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (27)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (55)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (172)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (179)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (216)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (218)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6229

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Tyr | Cys | Asp | Glu | Ser | Arg | Leu | Ser | Asn | Leu | Leu | Arg | Arg | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Glu | Xaa | Asp | Arg | Asp | Xaa | Arg | Leu | Xaa | Thr | Val | Lys | Gln | Leu |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Phe | Ile | Gln | Gln | Pro | Glu | Asn | Lys | Leu | Val | Leu | Val | Lys | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Ile | Leu | Ala | Ala | Xaa | His | Asp | Val | Leu | Asn | Glu | Ser | Ser | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Gln | Glu | Leu | Arg | Gln | Glu | Gly | Ala | Cys | Cys | Leu | Gly | Leu | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ala | Ser | Leu | Ser | Tyr | Glu | Ala | Glu | Lys | Ile | Phe | Lys | Trp | Ile | Phe |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

## 5451

Ser Lys Phe Ser Ser Ser Ala Lys Asp Glu Val Lys Leu Leu Tyr Leu  
 100 105 110

Cys Ala Thr Tyr Lys Ala Leu Glu Thr Val Gly Glu Lys Lys Ala Phe  
 115 120 125

Ser Ser Val Met Gln Leu Val Met Thr Ser Leu Gln Ser Ile Leu Glu  
 130 135 140

Asn Val Asp Thr Pro Glu Leu Leu Cys Lys Cys Val Lys Cys Ile Leu  
 145 150 155 160

Leu Val Ala Arg Cys Tyr Pro His Ile Phe Ser Xaa Asn Phe Arg Asp  
 165 170 175

Thr Val Xaa Ile Leu Val Gly Trp His Arg Asp His Thr Gln Lys Pro  
 180 185 190

Ser Leu Thr Gln Gln Val Ser Gly Trp Leu Gln Ser Leu Glu Pro Phe  
 195 200 205

Trp Val Ala Asp Leu Ala Phe Xaa Thr Xaa Leu Leu Gly Ser Val Ser  
 210 215 220

Arg Arg His Gly Ser Ile Cys  
 225 230

<210> 6230

<211> 305

<212> PRT

<213> Homo sapiens

<400> 6230

Asp Trp Val Ser Val Gly Gly Ala Trp Val Trp Arg Ala Gly Gln Gly  
 1 5 10 15

Leu Leu Gly Leu Gly Asp Gly Asp Gly Ala Gly Ser Gln Arg Arg Gln  
 20 25 30

Gly Leu Arg Ala Glu Glu Arg Thr Trp Ser Pro Gly Ser Arg Val Gly  
 35 40 45

Asp Ala Ala Arg His Arg Cys Phe Leu Lys Val Ser Arg Leu Glu Ala  
 50 55 60

Gln Leu Leu Leu Glu Arg Tyr Pro Glu Cys Gly Asn Leu Leu Leu Arg  
 65 70 75 80



## 5452

Pro Ser Gly Asp Gly Ala Asp Gly Val Ser Val Thr Thr Arg Gln Met  
                             85                            90                            95  
 His Asn Gly Thr His Val Val Arg His Tyr Lys Val Lys Arg Glu Gly  
                             100                            105                            110  
 Pro Lys Tyr Val Ile Asp Val Glu Gln Pro Phe Ser Cys Thr Ser Leu  
                             115                            120                            125  
 Asp Ala Val Val Asn Tyr Phe Val Ser His Thr Lys Lys Ala Leu Val  
                             130                            135                            140  
 Pro Phe Leu Leu Asp Glu Asp Tyr Glu Lys Val Leu Gly Tyr Val Glu  
 145                            150                            155                            160  
 Ala Asp Lys Glu Asn Gly Glu Asn Val Trp Val Ala Pro Ser Ala Pro  
                             165                            170                            175  
 Gly Pro Gly Pro Ala Pro Cys Thr Gly Gly Pro Lys Pro Leu Ser Pro  
                             180                            185                            190  
 Ala Ser Ser Gln Asp Lys Leu Pro Pro Leu Pro Pro Leu Pro Asn Gln  
                             195                            200                            205  
 Glu Glu Asn Tyr Val Thr Pro Ile Gly Asp Gly Pro Ala Val Asp Tyr  
                             210                            215                            220  
 Glu Asn Gln Asp Val Ala Ser Ser Ser Trp Pro Val Ile Leu Lys Pro  
 225                            230                            235                            240  
 Lys Lys Leu Pro Lys Pro Pro Ala Lys Leu Pro Lys Pro Pro Val Gly  
                             245                            250                            255  
 Pro Lys Pro Glu Pro Lys Val Phe Asn Gly Gly Leu Gly Arg Lys Leu  
                             260                            265                            270  
 Pro Val Ser Ser Ala Gln Pro Leu Phe Pro Thr Ala Gly Leu Ala Asp  
                             275                            280                            285  
 Met Thr Ala Glu Leu Gln Lys Lys Leu Glu Lys Arg Arg Ala Leu Glu  
                             290                            295                            300

His  
 305

<210> 6231  
 <211> 210  
 <212> PRT  
 <213> Homo sapiens

## 5453

&lt;400&gt; 6231

Thr Met Ala Ser Met Gly Leu Gln Val Met Gly Ile Ala Leu Ala Val  
 1 5 10 15  
 Leu Gly Trp Leu Ala Val Met Leu Cys Cys Ala Leu Pro Met Trp Arg  
 20 25 30  
 Val Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ser Gln Thr Ile Trp  
 35 40 45  
 Glu Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln  
 50 55 60  
 Cys Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala  
 65 70 75 80  
 Ala Arg Ala Leu Val Ile Ile Ser Ile Ile Val Ala Ala Leu Gly Val  
 85 90 95  
 Leu Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Leu Glu Asp Glu  
 100 105 110  
 Ser Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu  
 115 120 125  
 Ala Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile  
 130 135 140  
 Ile Gln Asp Phe Tyr Asn Pro Leu Val Ala Ser Gly Gln Lys Arg Glu  
 145 150 155 160  
 Met Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu  
 165 170 175  
 Leu Gly Gly Gly Leu Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys  
 180 185 190  
 Pro Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn  
 195 200 205  
 Tyr Val  
 210

&lt;210&gt; 6232

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

## 5454

&lt;400&gt; 6232

Ser Phe Asn Pro Trp Pro Pro Pro Arg Asn Ser Asp Phe Ser Arg Glu  
 1 5 10 15

Glu Glu Ala Ala Gly Ala Val Gly Leu Gly Leu His Arg Ala Gly Arg  
 20 25 30

Ala Val Gly Lys Ala Gly Glu Leu Leu Cys Cys Trp Ala Ser Leu Trp  
 35 40 45

Pro Ser Leu Pro Thr Leu Arg Cys Met Lys Cys Met Tyr Arg Pro Glu  
 50 55 60

Met Phe Ile Gln Pro Ile Lys Met Glu Phe Pro Tyr Leu Ser Val Lys  
 65 70 75 80

Lys Lys Lys Lys Lys Lys Leu Glu  
 85

&lt;210&gt; 6233

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6233

Asp Asn Lys Leu Ile Leu Asn Ala Ile Tyr Val Leu Ser Leu Leu Trp  
 1 5 10 15

His Leu Phe Arg Ser Cys Ser Asn His Cys Ser Arg Ala Leu Gln Ile  
 20 25 30

Lys

&lt;210&gt; 6234

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6234

Leu Leu Leu Leu Leu Gly Met Ala Ala Arg Ile Val Glu Arg Arg Gly  
 1 5 10 15

Leu Glu Ser Trp Ser Asn Pro Gly Leu Lys Ser Gly Leu Val Ile Phe  
 20 25 30

Gln Leu Leu Ser Trp Val Ser Phe Ala Asn Phe Leu Ser Phe Ile Ser

35 40 45

Leu Ile Asn Thr Val Gly His Asn Ser Tyr Ser Cys Ile Glu Asn  
50 55 60

<210> 6235  
<211> 178  
<212> PRT  
<213> Homo sapiens

<400> 6235

Gln Leu Leu Asp Lys His Ser Ala Ala Gly Phe Ala Met Ala Ala Ile  
1 5 10 15  
Pro Pro Asp Ser Trp Gln Pro Pro Asn Val Tyr Leu Glu Thr Ser Met  
20 25 30  
Gly Ile Ile Val Leu Glu Leu Tyr Trp Lys His Ala Pro Lys Thr Cys  
35 40 45  
Lys Asn Phe Ala Glu Leu Ala Arg Arg Gly Tyr Tyr Asn Gly Thr Lys  
50 55 60  
Phe His Arg Ile Ile Lys Asp Phe Met Ile Gln Gly Gly Asp Pro Thr  
65 70 75 80  
Gly Thr Gly Arg Gly Gly Ala Ser Ile Tyr Gly Lys Gln Phe Glu Asp  
85 90 95  
Glu Leu His Pro Asp Leu Lys Phe Thr Gly Ala Gly Ile Leu Ala Met  
100 105 110  
Ala Asn Ala Gly Pro Asp Thr Asn Gly Ser Gln Phe Phe Val Thr Leu  
115 120 125  
Ala Pro Thr Gln Trp Leu Asp Gly Lys His Thr Ile Phe Gly Arg Val  
130 135 140  
Cys Gln Gly Ile Gly Met Val Asn Arg Val Gly Met Val Glu Thr Asn  
145 150 155 160  
Ser Gln Asp Arg Pro Val Asp Asp Val Lys Ile Ile Lys Ala Tyr Pro  
165 170 175  
Ser Gly

## 5456

<210> 6236  
 <211> 175  
 <212> PRT  
 <213> Homo sapiens

<400> 6236  
 Met Asp Val Lys Thr Leu Val Gln Gln Leu Tyr Thr Thr Leu Cys Ile  
           1                  5                  10                  15  
 Glu Gln His Gln Leu Asn Lys Glu Arg Glu Leu Ile Glu Arg Leu Glu  
                   20                  25                  30  
 Asp Leu Lys Glu Gln Leu Ala Pro Leu Glu Lys Val Arg Ile Glu Ile  
           35                  40                  45  
 Ser Arg Lys Ala Glu Lys Arg Thr Thr Leu Val Leu Trp Gly Gly Leu  
           50                  55                  60  
 Ala Tyr Met Ala Thr Gln Phe Gly Ile Leu Ala Arg Leu Thr Trp Trp  
           65                  70                  75                  80  
 Glu Tyr Ser Trp Asp Ile Met Glu Pro Val Thr Tyr Phe Ile Thr Tyr  
                   85                  90                  95  
 Gly Ser Ala Met Ala Met Tyr Ala Tyr Phe Val Met Thr Arg Gln Glu  
           100                  105                  110  
 Tyr Val Tyr Pro Glu Ala Arg Asp Arg Gln Tyr Leu Leu Phe Phe His  
           115                  120                  125  
 Lys Gly Ala Lys Lys Ser Arg Phe Asp Leu Glu Lys Tyr Asn Gln Leu  
           130                  135                  140  
 Lys Asp Ala Ile Ala Gln Ala Glu Met Asp Leu Lys Arg Leu Arg Asp  
           145                  150                  155                  160  
 Pro Leu Gln Val His Leu Pro Leu Arg Gln Ile Gly Glu Lys Asp  
                   165                  170                  175

<210> 6237  
 <211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 6237  
 Thr Arg Pro Lys Leu Cys Ala Gly Ile Met Ile Thr Ala Ser His Asn  
           1                  5                  10                  15  
 Pro Lys Gln Asp Asn Gly Tyr Lys Val Tyr Trp Asp Asn Gly Ala Gln

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 20  |     |     |     | 25  |     |     |     | 30  |     |     |     |     |     |     |     |  |
| Ile | Ile | Ser | Pro | His | Asp | Lys | Gly | Ile | Ser | Gln | Ala | Ile | Glu | Glu | Asn |  |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |  |
| Leu | Glu | Pro | Trp | Pro | Gln | Ala | Trp | Asp | Asp | Ser | Leu | Ile | Asp | Ser | Ser |  |
|     |     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |  |
| Pro | Leu | Leu | His | Asn | Pro | Ser | Ala | Ser | Ile | Asn | Asn | Asp | Tyr | Phe | Glu |  |
|     |     | 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |  |
| Asp | Leu | Lys | Lys | Tyr | Cys | Phe | His | Arg | Ser | Val | Asn | Arg | Glu | Thr | Lys |  |
|     |     |     |     | 85  |     |     |     |     |     |     | 90  |     |     | 95  |     |  |
| Val | Lys | Phe | Val | His | Thr | Ser | Val | His | Gly | Val | Gly | His | Ser | Phe | Val |  |
|     |     |     |     | 100 |     |     |     |     |     |     | 105 |     |     | 110 |     |  |
| Gln | Ser | Ala | Phe | Lys | Ala | Phe | Asp | Leu | Val | Pro | Pro | Glu | Ala | Val | Pro |  |
|     |     |     |     | 115 |     |     |     |     |     |     |     |     | 125 |     |     |  |
| Glu | Gln | Lys | Asp | Pro | Asp | Pro | Glu | Phe | Pro | Thr | Val | Lys | Tyr | Pro | Asn |  |
|     |     |     |     | 130 |     |     |     |     |     |     |     |     | 140 |     |     |  |
| Pro | Glu | Glu | Gly | Lys | Gly | Val | Leu | Thr | Leu | Ser | Phe | Ala | Leu | Ala | Asp |  |
|     |     |     |     |     |     | 150 |     |     |     |     |     |     | 155 |     |     |  |
| Lys | Thr | Lys | Ala | Arg | Ile | Val | Leu | Ala | Asn | Asp | Pro | Asp | Ala | Asp | Arg |  |
|     |     |     |     |     |     | 165 |     |     |     |     |     |     | 170 |     |     |  |
| Leu | Ala | Val | Ala | Glu | Lys | Gln | Asp | Ser | Gly | Glu | Trp | Arg | Val | Phe | Ser |  |
|     |     |     |     |     |     | 180 |     |     |     |     |     |     | 190 |     |     |  |
| Gly | Asn | Glu | Leu | Gly | Ala | Leu | Leu | Gly | Trp | Trp | Leu | Phe | Thr | Ser | Trp |  |
|     |     |     |     |     |     |     |     |     |     |     |     | 205 |     |     |     |  |
| Lys | Glu | Lys | Asn | Gln | Asp | Arg | Ser | Ala | Leu | Lys | Asp | Thr | Tyr | Met | Leu |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 220 |     |  |
| Ser | Ser | Thr | Val | Ser | Ser | Lys | Ile | Leu | Arg | Ala | Ile | Ala | Leu | Lys | Glu |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 235 |     |  |
| Gly | Phe | His | Phe | Glu | Glu | Thr | Leu | Thr | Gly | Phe | Lys | Trp | Met | Gly | Asn |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 255 |     |  |
| Arg | Ala | Lys | Gln | Leu | Ile | Asp | Gln | Gly | Lys | Thr | Val | Leu | Phe | Ala | Phe |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 270 |     |  |
| Glu | Glu | Ala | Ile | Gly | Tyr | Met | Cys | Cys | Pro | Phe | Val | Leu | Asp | Lys | Asp |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 285 |     |  |
| Gly | Val | Ser | Ala | Ala | Val | Ile | Ser | Ala | Glu | Leu | Ala | Ser | Phe | Leu | Ala |  |

## 5458

290                                      295                                      300  
 Thr Lys Asn Leu Ser Leu Ser Gln Gln Leu Lys Ala Ile Tyr Val Glu  
 305                                      310                                      315                                      320  
 Tyr Gly Tyr His Ile Thr Lys Ala Ser Tyr Phe Ile Cys His Asp Gln  
                                     325                                      330                                      335  
 Glu Thr Ile Lys Lys Leu Phe Glu Asn Leu Arg Asn Tyr Asp Gly Lys  
                                     340                                      345                                      350  
 Asn Asn Tyr Pro Lys Ala Cys Gly Lys Phe Glu Ile Ser Ala Ile Arg  
                                     355                                      360                                      365  
 Asp Leu Thr Thr Gly Tyr Asp Asp Ser Gln Pro Asp Lys Lys Ala Val  
                                     370                                      375                                      380  
 Leu Pro Thr Ser Lys Ser Ser Gln Met Ile Thr Phe Thr Phe Ala Asn  
 385                                      390                                      395                                      400  
 Gly Gly Val Ala Thr Met Arg Thr Ser Gly Thr Glu Pro Lys Ile Lys  
                                     405                                      410                                      415  
 Tyr Tyr Ala Glu Leu Cys Ala Pro Pro Gly Asn Ser Asp Pro Glu Gln  
                                     420                                      425                                      430  
 Leu Lys Lys Glu Leu Asn Glu Leu Val Ser Ala Ile Glu Glu His Phe  
                                     435                                      440                                      445  
 Phe Gln Pro Gln Lys Tyr Asn Leu Gln Pro Lys Ala Asp  
                                     450                                      455                                      460

&lt;210&gt; 6238

&lt;211&gt; 925

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6238

Ala Arg Gly Glu Ile Thr Gly Arg Cys Thr Ala Met Gly Pro Phe Lys  
 1                                      5                                      10                                      15  
 Ser Ser Val Phe Ile Leu Ile Leu His Leu Leu Glu Gly Ala Leu Ser  
                                     20                                      25                                      30  
 Asn Ser Leu Ile Gln Leu Asn Asn Asn Gly Tyr Glu Gly Ile Val Val  
                                     35                                      40                                      45  
 Ala Ile Asp Pro Asn Val Pro Glu Asp Glu Thr Leu Ile Gln Gln Ile  
                                     50                                      55                                      60

## 5459

Lys Asp Met Val Thr Gln Ala Ser Leu Tyr Leu Phe Glu Ala Thr Gly  
 65 70 75 80

Lys Arg Phe Tyr Phe Lys Asn Val Ala Ile Leu Ile Pro Glu Thr Trp  
 85 90 95

Lys Thr Lys Ala Asp Tyr Val Arg Pro Lys Leu Glu Thr Tyr Lys Asn  
 100 105 110

Ala Asp Val Leu Val Ala Glu Ser Thr Pro Pro Gly Asn Asp Glu Pro  
 115 120 125

Tyr Thr Glu Gln Met Gly Asn Cys Gly Glu Lys Gly Glu Arg Ile His  
 130 135 140

Leu Thr Pro Asp Phe Ile Ala Gly Lys Lys Leu Ala Glu Tyr Gly Pro  
 145 150 155 160

Gln Gly Arg Ala Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val  
 165 170 175

Phe Asp Glu Tyr Asn Asn Asp Glu Lys Phe Tyr Leu Ser Asn Gly Arg  
 180 185 190

Ile Gln Ala Val Arg Cys Ser Ala Gly Ile Thr Gly Thr Asn Val Val  
 195 200 205

Lys Lys Cys Gln Gly Gly Ser Cys Tyr Thr Lys Arg Cys Thr Phe Asn  
 210 215 220

Lys Val Thr Gly Leu Tyr Glu Lys Gly Cys Glu Phe Val Leu Gln Ser  
 225 230 235 240

Arg Gln Thr Glu Lys Ala Ser Ile Met Phe Ala Gln His Val Asp Ser  
 245 250 255

Ile Val Glu Phe Cys Thr Glu Gln Asn His Asn Lys Glu Ala Pro Asn  
 260 265 270

Lys Gln Asn Gln Lys Cys Asn Leu Arg Ser Thr Trp Glu Val Ile Arg  
 275 280 285

Asp Ser Glu Asp Phe Lys Lys Thr Thr Pro Met Thr Thr Gln Pro Pro  
 290 295 300

Asn Pro Thr Phe Ser Leu Leu Gln Ile Gly Gln Arg Ile Val Cys Leu  
 305 310 315 320

Val Leu Asp Lys Ser Gly Ser Met Ala Thr Gly Asn Arg Leu Asn Arg  
 325 330 335



## 5460

Leu Asn Gln Ala Gly Gln Leu Phe Leu Leu Gln Thr Val Glu Leu Gly  
 340 345 350  
 Ser Trp Val Gly Met Val Thr Phe Asp Ser Ala Ala His Val Gln Ser  
 355 360 365  
 Glu Leu Ile Gln Ile Asn Ser Gly Ser Asp Arg Asp Thr Leu Ala Lys  
 370 375 380  
 Arg Leu Pro Ala Ala Ala Ser Gly Gly Thr Ser Ile Cys Ser Gly Leu  
 385 390 395 400  
 Arg Ser Ala Phe Thr Val Ile Arg Lys Lys Tyr Pro Thr Asp Gly Ser  
 405 410 415  
 Glu Ile Val Leu Leu Thr Asp Gly Glu Asp Asn Thr Ile Ser Gly Cys  
 420 425 430  
 Phe Asn Glu Val Lys Gln Ser Gly Ala Ile Ile His Thr Val Ala Leu  
 435 440 445  
 Gly Pro Ser Ala Ala Gln Glu Leu Glu Glu Leu Ser Lys Met Thr Gly  
 450 455 460  
 Gly Leu Gln Thr Tyr Ala Ser Asp Gln Val Gln Asn Asn Gly Leu Ile  
 465 470 475 480  
 Asp Ala Phe Gly Ala Leu Ser Ser Gly Asn Gly Ala Val Ser Gln Arg  
 485 490 495  
 Ser Ile Gln Leu Glu Ser Lys Gly Leu Thr Leu Gln Asn Ser Gln Trp  
 500 505 510  
 Met Asn Gly Thr Val Ile Val Asp Ser Thr Val Gly Lys Asp Thr Leu  
 515 520 525  
 Phe Leu Ile Thr Trp Thr Thr Gln Pro Pro Gln Ile Leu Leu Trp Asp  
 530 535 540  
 Pro Ser Gly Gln Lys Gln Gly Gly Phe Val Val Asp Lys Asn Thr Lys  
 545 550 555 560  
 Met Ala Tyr Leu Gln Ile Pro Gly Ile Ala Lys Val Gly Thr Trp Lys  
 565 570 575  
 Tyr Ser Leu Gln Ala Ser Ser Gln Thr Leu Thr Leu Thr Val Thr Ser  
 580 585 590  
 Arg Ala Ser Asn Ala Thr Leu Pro Pro Ile Thr Val Thr Ser Lys Thr  
 595 600 605

## 5461

Asn Lys Asp Thr Ser Lys Phe Pro Ser Pro Leu Val Val Tyr Ala Asn  
 610 615 620  
 Ile Arg Gln Gly Ala Ser Pro Ile Leu Arg Ala Ser Val Thr Ala Leu  
 625 630 635 640  
 Ile Glu Ser Val Asn Gly Lys Thr Val Thr Leu Glu Leu Leu Asp Asn  
 645 650 655  
 Gly Ala Gly Ala Asp Ala Thr Lys Asp Asp Gly Val Tyr Ser Arg Tyr  
 660 665 670  
 Phe Thr Thr Tyr Asp Thr Asn Gly Arg Tyr Ser Val Lys Val Arg Ala  
 675 680 685  
 Leu Gly Gly Val Asn Ala Ala Arg Arg Arg Val Ile Pro Gln Gln Ser  
 690 695 700  
 Gly Ala Leu Tyr Ile Pro Gly Trp Ile Glu Asn Asp Glu Ile Gln Trp  
 705 710 715 720  
 Asn Pro Pro Arg Pro Glu Ile Asn Lys Asp Asp Val Gln His Lys Gln  
 725 730 735  
 Val Cys Phe Ser Arg Thr Ser Ser Gly Gly Ser Phe Val Ala Ser Asp  
 740 745 750  
 Val Pro Asn Ala Pro Ile Pro Asp Leu Phe Pro Pro Gly Gln Ile Thr  
 755 760 765  
 Asp Leu Lys Ala Glu Ile His Gly Gly Ser Leu Ile Asn Leu Thr Trp  
 770 775 780  
 Thr Ala Pro Gly Asp Asp Tyr Asp His Gly Thr Ala His Lys Tyr Ile  
 785 790 795 800  
 Ile Arg Ile Ser Thr Ser Ile Leu Asp Leu Arg Asp Lys Phe Asn Glu  
 805 810 815  
 Ser Leu Gln Val Asn Thr Thr Ala Leu Ile Pro Lys Glu Ala Asn Ser  
 820 825 830  
 Glu Glu Val Phe Leu Phe Lys Pro Glu Asn Ile Thr Phe Glu Asn Gly  
 835 840 845  
 Thr Asp Leu Phe Ile Ala Ile Gln Ala Val Asp Lys Val Asp Leu Lys  
 850 855 860  
 Ser Glu Ile Ser Asn Ile Ala Arg Val Ser Leu Phe Ile Pro Pro Gln  
 865 870 875 880

## 5462

Thr Pro Pro Glu Thr Pro Ser Pro Asp Glu Thr Ser Ala Pro Cys Pro  
                   885                  890                  895

Asn Ile His Ile Asn Ser Thr Ile Pro Gly Ile His Ile Leu Lys Ile  
                   900                  905                  910

Met Trp Lys Trp Ile Gly Glu Leu Gln Leu Ser Ile Ala  
                   915                  920                  925

<210> 6239

<211> 311

<212> PRT

<213> Homo sapiens

<400> 6239

Val Leu Lys Phe Leu Leu Leu Gln Thr Met Asp Glu Gln Ser Gln Gly  
   1                  5                  10                  15

Met Gln Gly Pro Pro Val Pro Gln Phe Gln Pro Gln Lys Ala Leu Arg  
                   20                  25                  30

Pro Asp Met Gly Tyr Asn Thr Leu Ala Asn Phe Arg Ile Glu Lys Lys  
                   35                  40                  45

Ile Gly Arg Gly Gln Phe Ser Glu Val Tyr Arg Ala Ala Cys Leu Leu  
                   50                  55                  60

Asp Gly Val Pro Val Ala Leu Lys Lys Val Gln Ile Phe Asp Leu Met  
   65                  70                  75                  80

Asp Ala Lys Ala Arg Ala Asp Cys Ile Lys Glu Ile Asp Leu Leu Lys  
                   85                  90                  95

Gln Leu Asn His Pro Asn Val Ile Lys Tyr Tyr Ala Ser Phe Ile Glu  
                   100                  105                  110

Asp Asn Glu Leu Asn Ile Val Leu Glu Leu Ala Asp Ala Gly Asp Leu  
                   115                  120                  125

Ser Arg Met Ile Lys His Phe Lys Lys Gln Lys Arg Leu Ile Pro Glu  
                   130                  135                  140

Arg Thr Val Trp Lys Tyr Phe Val Gln Leu Cys Ser Ala Leu Glu His  
   145                  150                  155                  160

Met His Ser Arg Arg Val Met His Arg Asp Ile Lys Pro Ala Asn Val  
                   165                  170                  175

## 5463

Phe Ile Thr Ala Thr Gly Val Val Lys Leu Gly Asp Leu Gly Leu Gly  
 180 185 190

Arg Phe Phe Ser Ser Lys Thr Thr Ala Ala His Ser Leu Val Gly Thr  
 195 200 205

Pro Tyr Tyr Met Ser Pro Glu Arg Ile His Glu Asn Gly Tyr Asn Phe  
 210 215 220

Lys Ser Asp Ile Trp Ser Leu Gly Cys Leu Leu Tyr Glu Met Ala Ala  
 225 230 235 240

Leu Gln Ser Pro Phe Tyr Gly Asp Lys Met Asn Leu Tyr Ser Leu Cys  
 245 250 255

Lys Lys Ile Glu Gln Cys Asp Tyr Pro Pro Leu Pro Ser Asp His Tyr  
 260 265 270

Ser Glu Glu Leu Arg Gln Leu Val Asn Met Cys Ile Asn Pro Asp Pro  
 275 280 285

Glu Lys Arg Pro Asp Val Thr Tyr Val Tyr Asp Val Ala Lys Arg Met  
 290 295 300

His Ala Cys Thr Ala Ser Ser  
 305 310

<210> 6240

<211> 258

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (16)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (220)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (248)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

## 5464

&lt;222&gt; (254)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (258)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6240

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | His | Leu | Leu | Pro | Gly | Pro | Ala | Ala | Val | His | Cys | Ala | Ser | Xaa |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Leu | His | Pro | Pro | Pro | Ala | Asp | Leu | Cys | Trp | Tyr | Cys | Arg | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Phe | Leu | Lys | Gly | Asn | Leu | Leu | Ile | Ile | Ile | Val | Ser | Val | Leu | Ile |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Pro | Leu | Ala | Leu | Met | Lys | His | Leu | Gly | Tyr | Leu | Gly | Tyr | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Leu | Ser | Leu | Thr | Cys | Met | Leu | Phe | Phe | Leu | Val | Ser | Val | Ile |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Lys | Lys | Phe | Gln | Leu | Gly | Cys | Ala | Ile | Gly | His | Asn | Glu | Thr | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Ser | Glu | Ala | Leu | Val | Gly | Leu | Pro | Ser | Gln | Gly | Leu | Asn | Ser |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Cys | Glu | Ala | Gln | Met | Phe | Thr | Val | Asp | Ser | Gln | Met | Ser | Tyr | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Ile | Met | Ala | Phe | Ala | Phe | Val | Cys | His | Pro | Glu | Val | Leu | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Tyr | Thr | Glu | Leu | Cys | Arg | Ser | Thr | Thr | Ser | Thr | Pro | Gln | Ala | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Ala | Gln | Asp | Ala | Gly | Arg | Gly | Gln | Arg | Val | His | Trp | Gly | His | Val |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | His | Val | Trp | Ala | His | Ser | Asn | Leu | Trp | Ile | Pro | His | Leu | Leu | Gln |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Cys | Glu | Gly | Gly | Asp | Ala | Ala | His | Val | Gln | Pro | Glu | Gly | Pro | Ala |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Pro | Leu | Cys | Ala | Pro | Gly | Arg | Ala | Ala | Ser | Xaa | Val | Thr | Pro | His |
|     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |

## 5465

Cys Ala Ser Arg Ala Gly Ser Tyr Pro Pro Gly Pro Gly Ser Asn Cys  
 225 230 235 240

Phe Ser Gln Ala Arg Ala Phe Xaa Leu Ala Thr Thr Leu Xaa Ala Ile  
 245 250 255

Ser Xaa

<210> 6241

<211> 149

<212> PRT

<213> Homo sapiens

<400> 6241

Val His Leu Leu Leu Phe Ser Arg Pro Tyr Asp Gly Lys Trp Ser Lys  
 1 5 10 15

Thr Met Val Gly Phe Gly Pro Glu Asp Asp His Phe Val Ala Glu Leu  
 20 25 30

Thr Tyr Asn Tyr Gly Val Gly Asp Tyr Lys Leu Gly Asn Asp Phe Met  
 35 40 45

Gly Ile Thr Leu Ala Ser Ser Gln Ala Val Ser Asn Ala Arg Lys Leu  
 50 55 60

Glu Trp Pro Leu Thr Glu Val Ala Glu Gly Val Phe Glu Thr Glu Ala  
 65 70 75 80

Pro Gly Gly Tyr Lys Phe Tyr Leu Gln Asn Arg Ser Leu Pro Gln Ser  
 85 90 95

Asp Pro Val Leu Lys Val Thr Leu Ala Val Ser Asp Leu Gln Lys Ser  
 100 105 110

Leu Asn Tyr Trp Cys Asn Leu Leu Gly Met Lys Ile Tyr Glu Lys Asp  
 115 120 125

Glu Glu Lys Gln Arg Ala Leu Leu Gly Tyr Ala Asp Asn Gln Val Ser  
 130 135 140

Asn Leu Gly Glu Glu  
 145

<210> 6242

<211> 126

5466

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (126)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6242

Leu Ser Leu Arg Thr Arg Glu Thr Pro Ala Pro Pro Arg Cys Glu Ala  
 1 5 10 15

Ala Ser Gln Gly Arg Val Gly Trp Arg Ala Asp Ala Ala Ala Glu Glu  
 20 25 30

Ala Val Arg Ser Val Trp Asn Arg Thr Arg Asp Arg Gly Thr Met Ala  
 35 40 45

Pro Gln Asn Leu Ser Thr Phe Cys Leu Leu Leu Leu Tyr Leu Ile Gly  
 50 55 60

Ala Val Ile Ala Gly Arg Asp Phe Tyr Lys Ile Leu Gly Val Pro Arg  
 65 70 75 80

Ser Ala Ser Ile Lys Asp Ile Lys Lys Ala Tyr Arg Lys Leu Ala Leu  
 85 90 95

Gln Leu His Pro Asp Arg Asn Pro Asp Asp Pro Gln Ala Gln Glu Lys  
 100 105 110

Phe Gln Asp Leu Gly Ala Ala Tyr Glu Val Leu Val Arg Xaa  
 115 120 125

&lt;210&gt; 6243

&lt;211&gt; 384

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6243

Gly Ile Leu Ala His Ser Leu Ser Pro Thr Leu Leu Ser His Arg Cys  
 1 5 10 15

Gln Glu Glu Cys Pro Phe Gly Ser Phe Gly Phe Gln Cys Ser Gln Arg  
 20 25 30

Cys Asp Cys His Asn Gly Gly Gln Cys Ser Pro Thr Thr Gly Ala Cys  
 35 40 45

Glu Cys Glu Pro Gly Tyr Lys Gly Pro Arg Cys Gln Glu Arg Leu Cys

## 5467

|   |     |    |     |     |
|---|-----|----|-----|-----|
| 50  |     | 55 |     | 60  |
| Pro Glu Gly Leu His Gly Pro Gly Cys Thr Leu Pro Cys Pro Cys Asp |     |    |     |     |
| 65  |     | 70 |     | 75  |
| Ala Asp Asn Thr Ile Ser Cys His Pro Val Thr Gly Ala Cys Thr Cys |     |    |     |     |
|   | 85  |    | 90  | 95  |
| Gln Pro Gly Trp Ser Gly His His Cys Asn Glu Ser Cys Pro Val Gly |     |    |     |     |
|   | 100 |    | 105 | 110 |
| Tyr Tyr Gly Asp Gly Cys Gln Leu Pro Cys Thr Cys Gln Asn Gly Ala |     |    |     |     |
|   | 115 |    | 120 | 125 |
| Asp Cys His Ser Ile Thr Gly Gly Cys Thr Cys Ala Pro Gly Phe Met |     |    |     |     |
|   | 130 |    | 135 | 140 |
| Gly Glu Val Cys Ala Val Ser Cys Ala Ala Gly Thr Tyr Gly Pro Asn |     |    |     |     |
|   | 145 |    | 150 | 155 |
| Cys Ser Ser Ile Cys Ser Cys Asn Asn Gly Gly Thr Cys Ser Pro Val |     |    |     |     |
|   | 165 |    | 170 | 175 |
| Asp Gly Ser Cys Thr Cys Lys Glu Gly Trp Gln Gly Leu Asp Cys Thr |     |    |     |     |
|   | 180 |    | 185 | 190 |
| Leu Pro Cys Pro Ser Gly Thr Trp Gly Leu Asn Cys Asn Glu Ser Cys |     |    |     |     |
|   | 195 |    | 200 | 205 |
| Thr Cys Ala Asn Gly Ala Ala Cys Ser Pro Ile Asp Gly Ser Cys Ser |     |    |     |     |
|   | 210 |    | 215 | 220 |
| Cys Thr Pro Gly Trp Leu Gly Asp Thr Cys Glu Leu Pro Cys Pro Asp |     |    |     |     |
|   | 225 |    | 230 | 235 |
| Gly Thr Phe Gly Leu Asn Cys Ser Glu His Cys Asp Cys Ser His Ala |     |    |     |     |
|   | 245 |    | 250 | 255 |
| Asp Gly Cys Asp Pro Val Thr Gly His Cys Cys Cys Leu Ala Gly Trp |     |    |     |     |
|   | 260 |    | 265 | 270 |
| Thr Gly Ile Arg Cys Asp Ser Thr Cys Pro Pro Gly Arg Trp Gly Pro |     |    |     |     |
|   | 275 |    | 280 | 285 |
| Asn Cys Ser Val Ser Cys Ser Cys Glu Asn Gly Gly Ser Cys Ser Pro |     |    |     |     |
|   | 290 |    | 295 | 300 |
| Glu Asp Gly Ser Cys Glu Cys Ala Pro Gly Phe Arg Gly Pro Leu Cys |     |    |     |     |
|   | 305 |    | 310 | 315 |
| Gln Arg Ile Cys Pro Pro Gly Phe Tyr Gly His Gly Cys Ala Gln Pro |     |    |     |     |



325                      330                      335

Ser Lys Trp Gln Lys Gln Ile Leu Ile Pro Thr Cys Met Leu Lys Gly  
370 375 380

Pro Leu Leu Ile His Gln His Glu Glu Ser His Leu Phe Gly Arg  
145 150 155

5469

&lt;210&gt; 6245

&lt;211&gt; 27

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6245

Arg Gln Pro Lys Cys Pro Ser Thr Asp Glu Trp Ile Gln Lys Met Trp  
 1 5 10 15

Tyr Val Tyr Thr Met Gly Thr Ser Gln Pro Gly  
 20 25

&lt;210&gt; 6246

&lt;211&gt; 77

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (62)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6246

Asp Leu Met Ile Leu Asn Thr Gly Val Ser Pro Ala Gln Ala Leu Ser  
 1 5 10 15

Leu Pro Ala Ala Ser His Val Arg His Asp Leu Leu Leu Leu Ala Phe  
 20 25 30

His His Asp Cys Glu Ala Phe Pro Ala Thr Trp Asn Cys Lys Ser Ile  
 35 40 45

Lys Pro Leu Phe Phe Tyr Lys Trp Pro Ser Leu Lys Tyr Xaa Phe Ile  
 50 55 60

Asn Ser Val Lys Trp Thr Ser Thr Val Asn Trp Tyr Gln  
 65 70 75

&lt;210&gt; 6247

&lt;211&gt; 251

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

## 5470

&lt;221&gt; SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6247

Xaa Leu Val Leu Xaa Ser Tyr Leu Gly Asp Thr Ile Glu Gly Thr Pro

1

5

10

15

Ala Gly Thr Gly Pro Glu Phe Pro Gly Arg Pro Thr Arg Pro Glu Gly

20

25

30

Ser Arg Gly Cys Gly Lys Gln His Ile Ser Asp Ser Ser Trp Leu Leu

35

40

45

Asp Ser Ala Gly Arg Glu Gly Arg Leu Val Ala Met Ser Gln Gln Lys

50

55

60

Cys Ile Val Ile Phe Ala Leu Val Cys Cys Phe Ala Ile Leu Val Ala

65

70

75

80

Leu Ile Phe Ser Ala Val Asp Ile Met Gly Glu Asp Glu Asp Gly Leu

85

90

95

Ser Glu Lys Asn Cys Gln Asn Lys Cys Arg Ile Ala Leu Val Glu Asn

100

105

110

Ile Pro Glu Gly Leu Asn Tyr Ser Glu Asn Ala Pro Phe His Leu Ser

115

120

125

Leu Phe Gln Gly Trp Met Asn Leu Leu Asn Met Ala Lys Lys Ser Val

130

135

140

Asp Ile Val Ser Ser His Trp Asp Leu Asn His Thr His Pro Ser Ala

145

150

155

160

Cys Gln Gly Gln Arg Leu Phe Glu Lys Leu Leu Gln Leu Thr Ser Gln

165

170

175

Asn Ile Glu Ile Lys Leu Val Ser Asp Val Thr Ala Asp Ser Lys Val

180

185

190

Leu Glu Ala Leu Lys Leu Lys Gly Ala Glu Val Thr Tyr Met Asn Met

195

200

205

Thr Ala Tyr Asn Lys Gly Arg Leu Gln Ser Ser Phe Trp Ile Val Asp

210

215

220

## 5471

Lys Gln His Val Tyr Ile Gly Ser Ala Gly Leu Asp Trp Gln Ser Leu  
 225 230 235 240

Gly Gln Val His Ile Leu Leu Tyr Ser Cys Lys  
 245 250

<210> 6248

<211> 137

<212> PRT

<213> Homo sapiens

<400> 6248

Lys Gly Val Thr Glu Phe Gln Gln Phe Ser Asp Phe Tyr Ile Leu Phe  
 1 5 10 15

Leu Phe Leu Ser Asn Pro Cys Leu Leu Ser Pro Gly Gly Lys Tyr Ile  
 20 25 30

Phe Phe Asn Val Phe Pro Ala Phe Leu Pro Lys Cys Val Phe Phe Phe  
 35 40 45

Gly Leu Leu Tyr Pro Ala Ser Ser Ala Val Pro Gly Ile Gly Pro Ser  
 50 55 60

Leu Gln Lys Pro Phe Gln Glu Tyr Leu Glu Ala Gln Arg Gln Lys Leu  
 65 70 75 80

His His Lys Ser Glu Met Gly Thr Pro Gln Gly Glu Asn Trp Leu Ser  
 85 90 95

Trp Met Phe Glu Lys Leu Val Val Val Met Val Cys Tyr Phe Ile Leu  
 100 105 110

Ser Ile Ile Asn Ser Met Ala Gln Ser Tyr Ala Lys Arg Ile Gln Gln  
 115 120 125

Arg Leu Asn Ser Glu Glu Lys Thr Lys  
 130 135

<210> 6249

<211> 125

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

## 5472

&lt;222&gt; (2)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6249

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Xaa | Ser | Trp | Ala | Ala | Leu | His | Ser | Gln | Val | Phe | Pro | Ala | Leu | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Lys | Arg | Trp | Thr | Gln | Val | Arg | Arg | Gly | Thr | Ala | Thr | Val | Gly | Gly |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ile | Leu | Gln | Val | Thr | Ala | Gly | His | Pro | Leu | Ala | Met | Ala | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Ala | Gly | His | Pro | Pro | Thr | Met | Val | Gln | Gly | Pro | Ala | Gly | His |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Ala | Met | Ala | Gln | Gly | Pro | Ala | Gly | His | Pro | Pro | Thr | Met | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Pro | Ala | Gly | Leu | Pro | Leu | Ala | Met | Ala | Gln | Val | Thr | His | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | His | Ile | Thr | Glu | Glu | Val | Glu | Glu | Asn | Arg | Thr | Gln | Asp | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Pro | Glu | Arg | Ile | Ala | Gln | Leu | Thr | Trp | Asn | Glu | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |

&lt;210&gt; 6250

&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (225)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (228)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (229)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 6250